



ALGAO Scotland

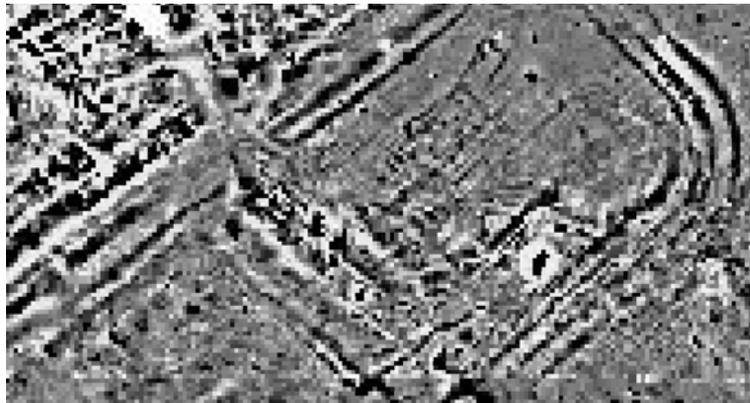
in conjunction with the

IfA Special Interest Group in Geophysics
(GeoSIG)

Seminar on Geophysics

9am to 4pm Wednesday 24th November 2010

The City Chambers, High Street, Edinburgh



This one day seminar will look at the role of geophysics in the planning context within Scotland.

Ten papers will be presented including leading geophysicists from Scotland and England looking at examples in the use of geophysics drawing on case studies primarily within Scotland

See programme on reverse

Attendance counts towards CPD

To book your place using the attached form and send to:

Caroline Ingle (ALGAO Admin Asst)

Cornerstone

Forbes Alford

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Tel: 01975 564071

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Programme

Paper No	Author	Title
1	Sue Ovenden Rose Geophysical Consultants	Geophysics: A waste of time and money?
2	Alette Kattenberg Orkney College	The use of geophysics in archaeological planning control in the Northern Isles
3	Duncan Hale University of Durham	Geophysical evaluation in Scotland and beyond: some case studies
4	Chris Bowles Borders Council	Geophysics in a development context: Recent experience from the Borders
5	Oliver O'Grady	Geophysics and site management: some recent applications at Properties in Care.
6	Paul Baggaley Wessex Archaeology	Marine Geophysics: Archaeological assessments for offshore renewable schemes
7	Peter McKeague RCAHMS	Documentation: Dealing with the afterlife of geophysical survey
8	Zoe Outram University of Bradford	Magnetic Moments in the Past: Archaeomagnetic dating in the UK
9	Erica Utsi Utsi Electronics Ltd	Ground Penetrating Radar without tears!
10	Jimmy Adcock GSB Prospection	Filling in the blanks: supplying context and efficiency to an excavation strategy
Lunch	David Elks	Practical Session on GPR



ALGAO Scotland in conjunction with IfA GEOsig

One day seminar on geophysics

Wednesday 24th November 2010

9am to 4pm at The City Chambers, High Street Edinburgh

Booking Form

I would like to bookplaces on this seminar.

Name(s):

Authority:

Contact e-mail (s):

Cost of the day, including refreshments, is £25 per person. NB Lunch is not included but there are many places nearby where food can be purchased.

Please return completed booking form deleting **two** of the following as appropriate:

*I enclose a cheque for £___ - *cheques to be made payable to 'ALGAO'*

*Please reserve me a place(s) and a cheque will be forwarded asap

*Please reserve me a place(s), however I will need an invoice to arrange payment. *[if requiring an invoice please provide details of purchase order number/cost codes as necessary].*

Please advise of any particular access requirements.

Bookings and payments or purchase orders should be sent to Caroline Ingle (ALGAO Admin Asst) **by 10th November 2010**

By e-mail: algao.cji@btinternet.com

Or post:

Cornerstone,
Forbes
Alford
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Tel: 019755 64071

Please note that fees will be refunded in the event of a cancellation up to 2 weeks before the event takes place (ie 10th November 2010). After that date, no refunds will be made.

ALGAO Scotland Geophysics Seminar
 24th November 2010
 Draft Programme

		Paper No	Start time	Finish time
Arrival			9.00	9.30
Introduction	Davy Strachan		9.20	9.30
Session 1	Chairman Peter Barker	1	9.30	9.50
Session 1		2	9.50	10.10
Session 1		3	10.10	10.30
Discussion			10.30	10.50
Coffee			10.50	11.10
Session 2	Chairman TBC	4	11.10	11.30
Session 2		5	11.30	11.50
Session 2		6	11.50	12.10
Discussion			12.10	12.30
Lunch			12.30	1.30
External demo	David Elks		1.30	2.00
Session 3	Chairman Chris Bowles	7	2.00	2.20
Session 3		8	2.20	2.40
Session 3		9	2.40	3.00
Session 3		10	3.00	3.20
Discussion / Summary			3.20	3.45
Tea			3.45	4.00
Disperse			4.00	

Paper 1: 9.30am to 9.50am

Geophysics: A waste of time and money?

Dr Susan Ovenden

Abstract

The use of geophysical survey, especially at the pre-planning stage, is an incredibly useful and powerful tool. Primarily its aim is to determine the extent nature of buried archaeological remains within a proposed development area. There is also an important role for geophysics in the more environmental or engineering aspect of developments such as depth of peat cover. But perhaps far more important is the role geophysical survey data can play in mitigation strategies and in assisting with the planning of evaluation excavations. In addition, while a 5% trench array will reveal the majority of archaeology at a site, geophysics provides a vitally important wider context.

For many years there has been a wide held belief that 'geophysics didn't work in Scotland'. While there are certain areas of Scotland, where certain techniques are not effective, this does not preclude the use of all geophysical techniques in all parts of Scotland. Although this view is now changing a little there still appears to be a widely held view amongst archaeologist in Scotland that geophysics is a waste of time and money. It appears that geophysical survey is viewed as unnecessary because either:

1) There is no known archaeology within a proposed development area therefore there is no need for geophysics.

or

2) There is known archaeology within a proposed development area therefore there is no need for geophysics.

As a geophysicist it appears as if there is an absolute faith in all other techniques available to the archaeologist, while geophysics is viewed with extreme caution, despite its tried and tested routine application in England, Wales and Ireland.

Susan Ovenden BSc (Hons) PhD MIFA

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Paper 2: 9.50am to 10.10

The use of geophysics in archaeological planning control in the Northern Isles

Dr. Alette Kattenberg

Abstract

In recent years a large number of geophysical surveys have been conducted in Orkney. The geology of Orkney – glacial till over sandstone - provides a good background for magnetometer surveys; other geophysical techniques give more mixed results. Shetland, on the other hand, has a complex geological make-up of metamorphic, igneous and sedimentary rocks which impedes the use of magnetometry as a blanket tool in planning control.

This paper investigates the use of several geophysical methods through recent work in the Northern Isles. A geophysical potential map is currently being produced for the Shetland Amenity Trust which will indicate areas where – based on current knowledge – specific geophysical or non-geophysical techniques may be used for archaeological prospection. The outcome of this work has relevance for other areas of Scotland with a geological background similar to that of Shetland.

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Paper 3: 10.10am to 10.30am

Geophysical evaluation in Scotland and beyond: some case studies

Duncan Hale

Abstract

This presentation will use case studies to demonstrate the application of geophysical techniques in different circumstances. Some techniques are more suitable than others in particular situations, depending on site-specific factors including the nature of likely targets; depth of likely targets; ground conditions; proximity of buildings, fences or services and the local geology and drift. The latter has often been a determining factor in Scotland and has often resulted in no geophysical evaluation taking place. This need not be the case. Sampling strategies will also be discussed, in terms of how best to evaluate large areas.

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Paper 4: 11.10am to 11.30am

Geophysics in a Development Context: Recent Experience from the Borders

Dr Chris Bowles

Abstract

Geophysics has been used in the Borders sporadically over the past few decades: though not in conjunction with development. Over the last two years, Scottish Borders Council has sought the use of Geophysics in several development projects with some positive results.

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Paper 5: 11.30am to 11.50am

Geophysics and site management: some recent applications at Properties in Care.

Dr Oliver O'Grady

Abstract

This paper will explore some ways in which geophysics can enhance the understanding and management of archaeological sites through presentation of results from some recent surveys at Scottish Properties in Care.

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Paper 6: 11.50am to 12.10pm

Marine Geophysics: Archaeological Assessments for Offshore Renewable Schemes

Paul Baggaley

Abstract

Since the first large scale offshore wind farm in the UK was commissioned in 2003 Wessex Archaeology has been involved in over 30 schemes, with the largest covering over 6000km² and generating over 6GW of electricity. With government commitments to generate 15% of our energy consumption from renewable energy sites by 2020, and a target to reduce our carbon emissions by 80% by 2050, the pace of building offshore developments is set to steadily increase as these schemes play a leading part in meeting these targets. The demands that these schemes will place on our marine resources need to be actively managed, in order to mitigate their impact on all aspects of the marine environment.

The requirement to consider the marine archaeological resource is enshrined in the marine licensing procedures for offshore developments. However, it can be difficult to communicate to curators, industry and the public what the marine archaeological resource is composed of and how it might be impacted by offshore developments. This is an area where geophysics can take a central role in terms of both demonstrating the variety of archaeological material which is preserved in the marine environment, and in providing the most efficient method of identifying and monitoring archaeological sites which lie both on and beneath the seafloor.

Over the last seven years Wessex Archaeology has worked with developers, marine survey companies and curators to develop techniques and methodologies enabling us to assess and characterise the archaeological resource and to implement effective mitigation for sites, which range from submerged landscapes through to wreck sites and individual find spots.

This paper will include examples from a number of offshore renewable schemes to demonstrate how we are using geophysics to access the range of sites which make up the marine archaeological resource and how geophysical surveys can be used as the basis of consistent archaeological advice over both the marine and terrestrial elements of a scheme.

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Paper 7: 2.00pm to 2.20pm

Documentation: dealing with the afterlife of geophysical survey

Peter McKeague and Sharon McMeekin

Abstract

The urban myth that 'Geophysical Survey does not work in Scotland' persists in spite of the growing number of surveys undertaken throughout the country. This paper discusses the need to properly document geophysical survey techniques systematically, to build the evidence base that geophysics *does* work in Scotland and help inform and develop application of the technique in the future. The University of Glasgow Scottish Archaeological Geophysical Database established in 2002, provides the baseline record of past application of geophysical survey techniques across Scotland but requires updating and 'publishing' via the internet. Key to sustaining the database and informing all stakeholders - the client, the practitioner and the curatorial sector - is the requirement for contractors to complete an OASIS record, including fully documenting techniques used, for project work undertaken. Migration from the desktop database to web-based delivery remains a priority, stimulated by the ALGAO: Scotland seminar in 2009 and the IfAGEosig. In discussing the need for documenting techniques, there is as much a need to consider the long term requirements for preserving the evidence generated by survey again to help inform future generations of decision makers.

Peter McKeague and Sharon McMeekin

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Paper 8: 2.20pm to 2.40pm

Magnetic Moments in the Past: Archaeomagnetic dating in the UK

Dr Zoe Outram

Abstract

The 'Magnetic Moments in the Past' project was launched by the Division of Archaeological, Geographical, and Environmental Sciences (AGES), University of Bradford and English Heritage, aiming to demonstrate and communicate the potential of archaeomagnetism in the UK. This was achieved by the production of a website to clearly present information about the technique, and a database of all UK archaeomagnetic studies carried out since the 1950s.

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Paper 9: 2.40pm to 3.00pm

Ground Penetrating Radar without tears.

Erica Utsi

Abstract

Abstract: Using examples from a wide range of archaeological investigations, this session will introduce participants to the practical aspects of where & how GPR can be useful (from standing buildings to the wetlands with all stops in between). It will cover the critical site information necessary for the GPR user, the types of survey strategy which can be deployed including the reasoning behind the choices to be made, the information and reporting which should result and also where to find a GPR user with the requisite field experience. If time allows, an opportunity will be given to handle a high frequency radar.

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Paper 10: 3.00pm to 3.20pm

Filling in the blanks: supplying context and efficiency to an excavation strategy.

Jimmy Adcock

Abstract

This presentation is a simple look at how geophysics can quickly and cheaply provide context to a scheme of excavation as part of an evaluation and, in the majority of cases, make that scheme more efficient. The paper takes a small number of data sets and analyzes the level of information they provide, looks at how they could feed into a trenching strategy, and the cost-effectiveness of such an approach with input from those working in geophysical companies, archaeological units/consultancies and local planning departments.

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