JUST A SAMPLE?

If it's there, we'll find it



OUR MISSION

'Successfully linking Research, Education and Practice to meet your challenges and needs."

• For more information, please contact:

School of Archaeology, Geography and Environmental Science (SAGES)

Quaternary Scientific

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RESEAD WE DELIVER

TEAM

Dr Rob Batchelor Director
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Dr Chris Green Senior Geoarchaeologist
Kevin Williams MA Environmental Archaeological Technician
Dr Stuart Black Associate Professor, Radioactive and stable isotopes
Gem Lafferty MSc Commercial Manager
Dr Nick Branch Head of the School of Archaeology, Geography & Environmental Science

Interested in a career in Archaeology or Environmental Archaeology?

Why not consider studying at Reading University where Quest funded internships, funded dissertation placements and career opportunities are available.

www.reading.ac.uk

Further details are available from Professor Martin Bell, Professor in Archaeological Science: m.g.bell@reading.ac.uk



QUEST

Archaeological science services





SCIENCE THAT WORKS **FOR YOU**

QUEST is a well-established commercial enterprise within the School of Archaeology, Geography and Environmental Science (SAGES) at the University of Reading.

We provide an expert environmental archaeological service to archaeological companies, environmental consultancies and government organisations. Since 1996, the business has expanded to include a network of specialist and technical staff that services all aspects of environmental

archaeological contract work. Utilising this and the extensive range of analytical equipment, laboratory facilities and technical expertise QUEST endeavor to become the leading environmental archaeological contract service facility in Europe.

FACILITIES

Field equipment for ground investigations, such as conventional sampling using peat corers, column, bulk and Kubiena sampling, and drilling equipment using an Atlas Copco 2-stroke percussion engine and Eijkelkamp window/windowless samplers

Computer graphics suite supporting PC systems, ArcView geographical information systems (GIS), Rockworks 2006, Erdas Imagine landscape analysis and visualisation, and remote sensing

Palaeoecological laboratories for analysis of pollen, diatoms, insects, waterlogged wood and seeds, charcoal and charred seeds. Ostracoda and Foraminifera. Mollusca, phytoliths, fungal spores and testate amoebae

Sedimentology and soil science laboratories, for sediment description, soil micromorphology, particle size analysis, peat humification and organic matter determinations

Geochemistry laboratories with facilities for atomic absorption spectrometry and XRD. XRF, ICP-OES, ICP-MS, GCMS, C/N isotopes and O/H isotopes

Strong links with geochronology laboratories offering facilities for radiocarbon, Pb210, U-series, OSL and T-L dating, tephrochronology and dendrochronology

EXPERIENCE

Members of QUEST have been involved in a wide range of projects, both in the UK and abroad. The projects have involved providing a full range of desktop studies, field-based investigations and sampling, laboratory assessment, laboratory analysis, and reporting services.

Geoarchaeology

Review of existing geological, sedimentological, pedological and hydrological data derived from BGS records, geotechnical reports, and archives held by public and private organisations.

Creation of deposit models using Rockworks and/or ArcView GIS, which are fully integrated with archaeological, palaeoenvironmental and palaeoeconomic records.

Collection of new borehole data using in-house equipment or cable percussion (U100) to provide samples suitable for assessment and/or analysis.

Description and assessment/analysis of the physical and chemical properties of soils and sediments to record changes in sub-surface environmental conditions.

Geochronology

Production of high-resolution temporal frameworks using a wide range of geochronological markers

Modelling of single or multi-method dated sedimentary sequences to compile agedepth and time sliced models, enabling age related visualisation of long-term processes and single events, and assisting in the determination of targeted dating programmes to address specific age related archaeological problems

Archaeobotany

Analysis of microfossils, especially pollen, diatoms and phytoliths, from a range of sedimentary contexts to reconstruct natural vegetation succession and quantify the impact of human groups on the natural environment, and record changes in pH, salinity and water quality

Analysis of macrofossils, especially charcoal, charred seeds and by-products of cultivation (chaff), waterlogged wood and seeds, to reconstruct natural changes in the environment, and past economies and diet

Zooarchaeology

Analysis of microfossils, especially Ostracoda and Foraminifera, from a range of sedimentary contexts to reconstruct environmental histories, in particular sea level change, water guality, depth and pH

Analysis of macrofossils, especially insects, Mollusca and animal bone, to reconstruct natural changes in the environment, and past economies and diet

JUST A SAMPLE?

If it's there, we'll find it

2.0

1.5

Depth (m OD)

0

-0.5

-1.0





Diatoms are indicative of marine, brackish or freshwater conditions and can reflect temperature, pH, oxygen and mineral content.



Mollusca have the potential to provide broad laeoenvironmental reconstruction and may provide useful information on woodland clearance, land-use, human economy and diet.



Insects provide valuable nformation on regional and local environmental conditions human and animal diet, and the function of archaeological features.



3230

BP)

(cal

Year

4450

Pollen provides valuable nformation on vegetation composition, structure and succession, plant migration, climate change, human modification of the natural vegetation cover and land-use and diet.

Waterlogged wood provides data on woodland composition, vegetation history, woodland management, agricultural practices, woodland exploitation, natural wild fires and material culture.

Waterlogged seeds and their stems, leaves and buds may provide valuable information on climate change, vegetation history, human economy and diet.

Charcoal can provide useful nformation on natural wildfires (including climate history), human-induced woodland clearance, agricultural practices and woodland management.



Ostracods are highly sensitive to changes in salinity, rainfall, emperature and alkalinity.

Mary .

Phytoliths may provide valuable nformation on grassland, cultivation of crops and the presence of herbivores.