Recent Work in Archaeological Geophysics

The Geological Society
Burlington House, Piccadilly, London W1J 0BG
Tuesday 6th December 2022

Programme

Lecture Programme:

0915-1000	**Registration and Coffee**
1000-1005	**Introduction**
1005-1020	*Integrating Geophysical and Remote Sensing Data for the Modelling of Geoarchaeological Resources in Alluvial Environments.* N Crabb, C Carey, A Howard and R Jackson
1025-1040	*Naught but Tradition Remains? Multi-Instrument Geophysics and the Recovery of the Landscape of Grand-Pre.* J Fowler
1045-1100	*Geophysics Has Its Day in Court: The Verdict on Rewilding Surveys at Court Green Manorial Settlement, Bere Regis.* P Cheetham and D Stewart
1105-1120	*Early Results from Large-Scale Multi-Method Geophysical Surveys at the Battlefield of Waterloo, Belgium.* D Williams, P De Smedt, K Welham and S Eve.
1125-1155	**Tea/Coffee break**
1155-1210	*Exploring Interoperability of Archaeological and Agricultural Geophysics. The Case of East Heslerton.* J Verhegge, R Opitz, E Baldwin, D Powlesland, S Campana, M Vieri, V Mayoral Herrera, V Robinson, R Fry and P De Smedt
1215-1230	*Municipal Garden Waste Compost: Its Effect on Magnetometry Results.* R Ainslie
1235-1250	*Evaluating Methodologies for Magnetometer Surveys in Wooded Areas.* A Schmidt and W Weber
1255-1300	**Morning closing remarks**

1300-1430	**Lunch (Lower Library)** – all delegates **NSGG AGM (Lecture Theatre)** – all welcome
1430-1445	*Large Scale Geophysical Investigations of the Medieval Manor of Austrått in Mid-Norway – Combining Metal Detecting, GPR and Magnetometer Surveys.* A Stamnes
1450-1505	*After the Biblical Flood: Magnetometer Prospecting at Fara (Iraq) to Assess the Excavations at Ancient Šuruppak from 120 Years Ago.* S Hahn, J Fassbinder, A Otto and B Einwag
1510-1525	*3D GPR Survey in the Recognition of Relics of Pre-War Buildings for the Reconstruction of the Saxon Palace in Warsaw (Poland).* M Pisz, R Mieszkowski, S Kowalczyk and E Krogulec
1530-1545	*Tracing Roman Grave Monuments in Ruffenhofen (Bavaria, Germany).* R Linck, A Stele and D Lenz
1550-1620	**Tea/Coffee break**
1620-1635	*GPR at Gorhambury: Surveys by the Community Archaeology Geophysics Group at the Roman City of Verulamium.* K Lockyear
1640-1655	*Old and New Frontiers: Ground Penetrating Radar Surveys at the Roman Fort of Trimontium.* K Armstrong, J Lawton and S Ovenden
1700-1715	*Reminiscences on 30 Years of Magnetic Surveying (Mostly) in the UK.* J Lyall
1720-1730	**Conclusion**
1735-1900	**ISAP AGM (Lecture Theatre)**

Posters (09:30-19:00 in the Lower Library):

Touching the Past: Tactile Models of Geophysical Images for Improving User Access to Archaeological Data Displays. A Booth, B Thomas, R Holt, S Sanchez, L Makin, S Ok, T Roberts and N Linford

Hydrological Assessment of Quarrendon Leas Elizabethan Water Gardens with a Portable Time Domain Electromagnetic System. M Guy and V Guy

GEOPHYSICS HAS ITS DAY IN COURT: THE VERDICT ON REWILDING SURVEYS AT COURT GREEN MANORIAL SETTLEMENT, BERE REGIS

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In its aims of restoring natural processes and increasing biodiversity, the rewilding movement is principally 'natural environment' driven, but in addition often aims to promote and enable community access. Land acquired by Dorset Wildlife Trust along the northern banks of the Bere Stream to the east of Bere Regis provides a good case study of the process of 'rewilding' with respect to our knowledge and understanding of the archaeological record of an historic landscape exploited and modified by man for over 7000 years. Entitled *Wild Woodbury*, the project is named after the Woodbury univallate hillfort that overlooks the area.

Rewilding takes many forms, with the project undertaken at Court Farm being focussed on low-input farming where the term 'wilder farming' would be considered more appropriate. The project will involve some areas of natural scrub and woodland regeneration and the removal of modern drainage to re-wet parts of the landscape (Farrington 2022). Whilst taking this area out of intense agricultural production protects the archaeology from the ravages of the plough, allowing nature to take its course will mean that in the future some areas may become less accessible for undertaking effective conventional geophysical survey. There are also plans to repurpose redundant agricultural buildings, create wildflower meadows and create a community food forest. Some project activities encroach on the scheduled area of the manorial settlement of Court Green and so appropriate scheduled monument consent is required. Geophysical survey had already been successfully applied to one area of the Court Farm manorial settlement and so it was logical to extend this work to cover the whole of the scheduled area, which has now been completed (Cheetham 2022). Survey involved the use of magnetometry, earth resistance and ground penetrating radar to investigate the archaeological potential and guide the management of the scheduled area. Despite the inherent limitations of geophysical survey with respect to the ephemeral nature of some medieval archaeology, perhaps fortuitously, the geophysical survey revealed that parts of the site are covered in relatively modern overburdens. These mask, but therefore protect, some of the area that may be affected by the changes in land use.

Next to be considered are the unscheduled areas of *Wild Woodbury*. Archaeological survey and excavation on adjacent areas of the south-west facing slopes of the Bere Stream valley revealed them to be rich in archaeological activity dating from the Mesolithic period onwards (Context One 2017), suggesting there were many sites to be discovered in the unscheduled parts the *Wild Woodbury* rewilding area. Local historian John Pitfield had also undertaken surface collection over parts of the rewilding area, and Dorset Wildlife Trust staff, when alerted to the signs of settlement and activity, reported several potential archaeological sites. A brief walk-over of part

of the rewilding area by the first author revealed the tell-tale signs of flint debitage and pottery from prehistoric sites, the burnt flint 'pot boilers' from Iron Age domestic sites, and areas of medieval and early post-medieval pottery together with a few sherds of Roman ceramics. In agreement with Dorset Wildlife Trust, it has been proposed that parts of the rewilding area are geophysically surveyed before they become less accessible. This will allow any archaeological sites identified to be managed appropriately within the rewilding project. The results so far confirm that a wide range archaeological sites exist, with work ongoing to complete the project. For example, in figure 1, below, a randomly surveyed area reveals a palimpsest of prehistoric and later magnetic anomalies/features located on a chalk spur overlooking the river.

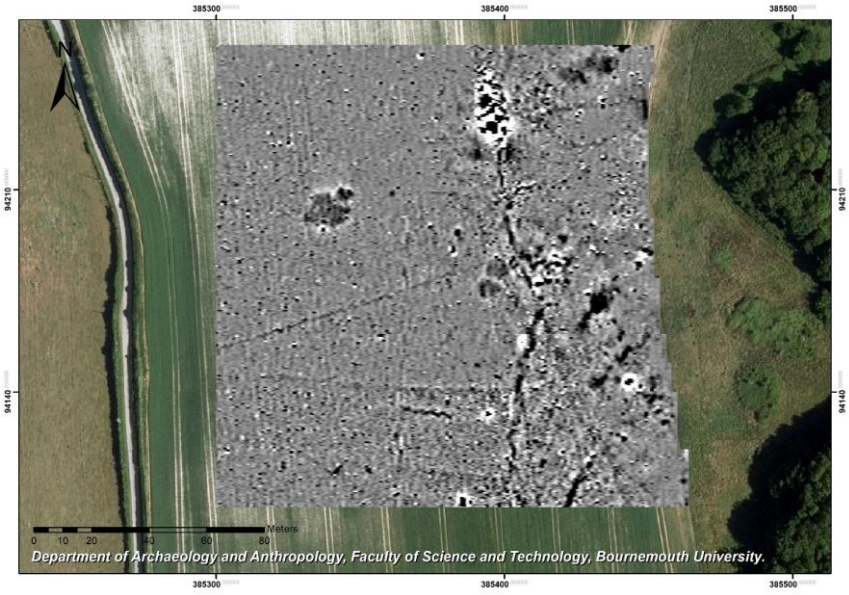

Figure 1: This randomly selected area of magnetic survey reveals a palimpsest of ditches, pits, lynchets and quarry pits, demonstrating the archaeological potential of the Wild Woodbury rewilding area. Bartington 601-2, 0.25 x 1m survey intervals. Black positive, plotted -3 to +3 nT.

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Bibliography
Cheetham P, 2022 *Geophysical Surveys of the Manorial Settlement at Court Farm, Bere Regis (Dorset), Preliminary Summary Report: Part 1 – Back Close*. Unpublished Report. Department of Archaeology & Anthropology, Bournemouth University: Poole.

Context One Heritage and Archaeology 2017 *Proposed Dorset Minerals Sites – Philliol's Farm (AS12): Heritage Assessment, November 2017*. C1 project code: C1/DBA/17/DMW. Available from: https://www.dorsetcouncil.gov.uk/documents/35024/281612/Heritage+Assessment+for+AS12+Philliol%27s+Farm+-+Phase+2.pdf/1fb78307-24e3-7303-227a-5557246e8b4c.

Farrington R, 2022. 'Striving for a Wilder Dorset.' In the *Dorset Natural History and Archaeological Society Magazine*, Edition 4, Summer 2022. DHNHS: Dorchester, 3-5.