Archiving Archaeological Data in the United Kingdom
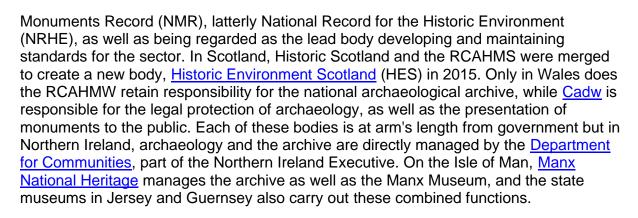
Julian D. Richards

Summary

Owing to its early lead in the world of digital preservation, fostered by the creation of the Archaeology Data Service in 1996, the UK is often considered to be in an advanced position for digital archiving of archaeological data. In some ways it is, but the situation is also complex, due to a highly fragmented landscape, spread across four nations, and multiple sectors. This overview article describes the organisation and structure of archaeology across the UK, and the provision for digital preservation and access. Digital archiving is still far from standard, but the situation is improving, and rests on firm foundations.

1. Introduction

The situation regarding the digital archiving of archaeological data in the UK is complex. In terms of legislation, institutions, archaeological guidelines and actual practice, the UK is not one country but four: England, Scotland, Wales and Northern Ireland (the 'home nations'); plus, the Isle of Man and the Channel Islands also take responsibility for their own archaeology. In addition, a wide range of sectors are involved in undertaking archaeological fieldwork and other archaeological research in each country: public, private and commercial, academic, and community archaeology.

In England, Scotland and Wales the national archival duties of each country were previously managed by the respective Royal Commissions: RCHME (Royal Commission on the Historical Monuments of England), RCAHMS (Royal Commission on the Ancient and Historical Monuments of Scotland), and RCAHMW (Royal Commission on the Ancient and Historical Monuments of Wales) but only that in Wales still survives as a separate organisation. In England the RCHME was merged with English Heritage in 1999, before that body was split again in 2015, with English Heritage retaining responsibility for heritage attractions (such as Stonehenge or Dover Castle) while a new body, Historic England, became responsible for the legal designation and protection of sites and monuments of national importance, and the management of the National

Monuments Record (NMR), latterly National Record for the Historic Environment (NRHE), as well as being regarded as the lead body developing and maintaining standards for the sector. In Scotland, Historic Scotland and the RCAHMS were merged to create a new body, Historic Environment Scotland (HES) in 2015. Only in Wales does the RCAHMW retain responsibility for the national archaeological archive, while Cadw is responsible for the legal protection of archaeology, as well as the presentation of monuments to the public. Each of these bodies is at arm's length from government but in Northern Ireland, archaeology and the archive are directly managed by the Department for Communities, part of the Northern Ireland Executive. On the Isle of Man, Manx National Heritage manages the archive as well as the Manx Museum, and the state museums in Jersey and Guernsey also carry out these combined functions.

Across the UK most archaeology - rescue, or preventative, archaeology as it is often known in Europe - is now undertaken by commercial archaeological contractors, as part of the process of development control, and according to the 1992 Valletta (Malta) Convention, but working according to specifications and local guidelines created by planning archaeologists employed in local government, generally at county level, and usually based in planning departments or museums. In addition, there are 30 or so universities across the UK that teach archaeology, and their staff may undertake fieldwork in their home country or abroad. External funding for research that generates digital data mainly comes from the various research councils, which since 2018 make up UKRI (UK Research and Innovation): primarily the AHRC (Arts and Humanities Research Council), although NERC (Natural Environment Research Council) funds science-based archaeology. Other significant UK funders of archaeological research include the Leverhulme Trust, the British Academy, and the Societies of Antiquaries of London and Scotland. Finally, across the UK there has always been an active independent sector, comprising local archaeological societies and community groups, and represented by the Council for British Archaeology (CBA), and Archaeology Scotland. Some of these groups receive project funding from the National Lottery Heritage Fund, but the majority rely on membership subscriptions.

The purpose of this article is to provide a brief overview of how this complex landscape maps onto digital archiving structures and practice across the UK. The national situations in England and Scotland are well covered by articles by Claire Tsang and Peter McKeague respectively, so this contribution will focus on other areas, and particularly the academic sector.

2. The Archaeology Data Service

The Archaeology Data Service (ADS) is the oldest digital repository dedicated to archaeology and heritage in the world, having been established on 1 October 1996 with the mission to preserve, catalogue, and describe digital data generated in the course of archaeological research and to facilitate its reuse (Richards 2008; 2017). This early UK lead came about through the academic-led establishment of the Arts and Humanities Data Service (AHDS). The ADS was one of five disciplinary-defined distributed services, coordinated by a central Executive service (Burnard and Short 1994). Two of the other services were already established, comprising the Oxford Text Archive, based in Oxford University Computing Service, and the History Data Service, based within the well-established social sciences UK Data Archive at Essex University. The remaining two services were also newly formed, comprising the Performing Arts Data Service in the University of Glasgow, and the Visual Arts Data Service at the Surrey Institute of Art and

Design. The assumption underlying the provision of discipline-specific services was that subject expertise is required at every stage, from the creation of a dataset, through to its preservation and assisting with reuse.

For the academic sector the ADS initially provided archiving services free of charge, largely funded by core research council grants and it became the mandated archive for researchers in receipt of funding from AHRC, NERC, the British Academy, Leverhulme Trust, and Society of Antiquaries of London, among others. Since March 2011, the ADS has been accredited with the Data Seal of Approval, an international 'kite-mark' for digital repositories, and in 2020 it was awarded the [Core Trust Seal](#) (CTS). At the time of writing, it is still the only accredited digital repository for archaeological data in the UK, although HES applied for CTS accreditation in 2020 (McKeague, [this issue](#)).

The ADS is hosted by the University of York, but while the other AHDS services had an exclusive focus on the university sector, it was recognised from an early stage that the majority of archaeological data in the UK was being generated in the state and commercial sectors and so the ADS took on a wider role, becoming the only UK-wide digital data repository for archaeology. Funding for the AHDS and ADS was top-sliced from the UK university research budget, primarily JISC (Joint Information Systems Committee) and AHRB (later renamed AHRC), but the ADS was encouraged to develop a charging policy, levying a one-off charge on the data depositor, but making data open and freely available at the point of use. The charging policy mirrored one that was already familiar to archaeologists in the museum sector, whereby a 'box charge' was generally levied when archaeological contractors deposited physical archives in museums.

This independent and self-funding income stream proved invaluable when, in March 2007, the AHRC decided to withdraw funding from the AHDS, proposing that institutional repositories in university libraries should take responsibility for the preservation of research data generated by academic researchers. The decision was widely regretted by many in the UK digital community, who watched the country lose its early lead while the European Commission invested heavily in digital research infrastructures in the arts and humanities, (including DARIAH and CLARIN). However, in recognition of the special case of the primary nature of data derived from excavation, the complex variety of data formats in archaeology, and the capacity of the ADS to generate income using its charging policy model, the AHRC agreed to award the ADS 5-year transitional funding from 2008-13 to allow it to become self-sufficient. Furthermore, at the time of writing in late 2020, the situation may shortly change again. The individual research councils have been amalgamated under the UKRI umbrella, where the science and engineering research councils - which have a long-established practice of funding infrastructure (such as super-computers, particle accelerators, telescopes and ice-breaking ships) - hold the greatest influence. A renewed appetite for investing in research infrastructure for the Arts and Humanities, including digital infrastructure, has emerged in the AHRC with plans for future funding (UKRI [2020](#)).

3. The UK-wide Picture

In the late 1990s, few archaeological organisations had the capacity to manage digital repositories. In England, the National Monuments Record, then managed by RCHME, always had a policy of only taking archives of sites of national significance, leaving the responsibility for other sites to regional museums, so it was natural for them to work with
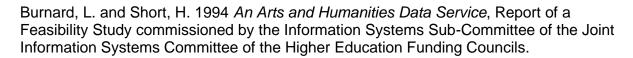
ADS from the outset, and for English Heritage and later Historic England to commission ADS to archive the digital data from projects it funded. In Scotland and Wales, the Royal Commissions had instead set out to provide a comprehensive national record, so they have sought to develop their own capabilities, via Canmore and Coflein respectively. In Northern Ireland archaeology is directly controlled by the state, and excavators have to be licensed; digital archiving provision is currently lacking, but at least the requirement for preparation of a digital archive is now included within the guidance issued by the Historic Environment Division of the Department of Communities. Although the situation in England, where *c.* 90% of UK fieldwork is conducted, is therefore different from that of the other home nations, each of the state bodies and ADS work together via the informal Bedern Group to try to ensure a consistent approach.

Nonetheless, and despite the well-established presence of ADS, there is still a lamentably low level of digital archiving of archaeological data in the UK, as noted by Tsang (this issue). State bodies can take a leadership role, and provide an example, but there is not a legal requirement for developers to fund archaeology (including archiving) and established practice in England rests upon Planning Policy Guidance (PPG16 and later PPG5). The implementation and enforcement of these guidance notes generally depends upon under-resourced local government archaeological officers, although more and more regions are now mandating digital archiving and, as Tsang notes, the UK-wide professional association, CIfA, is now taking a key role in encouraging archiving with an accredited digital repository. Major state-funded transport infrastructure projects, commencing with the Channel Tunnel Rail Link (HS1) and Heathrow Terminal 5, and now followed by Crossrail and HS2, are also playing a significant role in encouraging best practice, so the situation is rapidly improving.

Meanwhile, some of the other sectors in UK archaeology are in danger of being left behind. After the withdrawal of AHRC funding for AHDS, and the consequent removal of an archiving mandate, the level of attention paid to FAIR data depends upon the policies of individual universities and the attitudes of academic archaeologists within them. Many recognise the importance of safeguarding their research data and are assiduous in depositing their datasets with ADS, funding permitting, but for others it is a lesser priority. Similarly, the community sector lacks training and resources, although the National Lottery Heritage Fund has recently launched a Digital Skills for Heritage programme, to build awareness and capacity among the wider public who carry out archaeological research in their local community.

4. Conclusion

In summary, owing to its early lead in the world of digital preservation, fostered by the creation of the AHDS and the ADS, the UK is often considered to be in an advanced position for digital archiving of archaeological data. In some ways it is, but the situation is also complex, due to a highly fragmented landscape, spread across four nations, and multiple sectors. Digital archiving is still far from standard, but the situation is improving, and does now rest on firm foundations.

Burnard, L. and Short, H. 1994 *An Arts and Humanities Data Service*, Report of a Feasibility Study commissioned by the Information Systems Sub-Committee of the Joint Information Systems Committee of the Higher Education Funding Councils.

Richards, J.D. 2008 'Managing digital preservation and access: The Archaeology Data Service' in F.P. McManamon, A. Stout and J.A. Barnes (eds) *Managing Archaeological Resources: Global context, national programs, local actions*, One World Archaeology **58**, Left Coast Press. 173-94.

Richards, J.D. 2017 'Twenty years preserving data: a view from the UK', *Advances in Archaeological Practice* **5**(3), 227-37. https://doi.org/10.1017/aap.2017.11

UKRI 2020 *The UK's Research and Innovation Infrastructure - opportunities to grow our capacity*. https://www.ukri.org/wp-content/uploads/2020/10/UKRI-201020-UKinfrastructure-opportunities-to-grow-our-capacity-FINAL.pdf