

## Archaeological Archives

- Existing guidance for archaeologists (UK and EU)
- Getting the detail
- The wider picture



Archaeological Archives (2011)

<https://doi.org/10.5284/1000078>

## Section 3.2.6 Digital material

- The digital archive consists entirely of digital data; coded information that is translated by a computer into a readable format.
- Example file types are CAD files, databases, digital aerial photograph interpretations, excavation archives, geophysical and other survey data, GIS files, images, satellite imagery, spreadsheets, text files and 3-D data.
- Transfer and short-term storage media include CD-ROMs, data-sticks or flash drives, DVDs, floppy discs, hard discs, and magnetic tape. These **are not suitable for the long-term preservation of the digital archive** and should be used only to submit digital material for permanent archiving.
- Long-term storage must be on permanent servers that are regularly backed up.

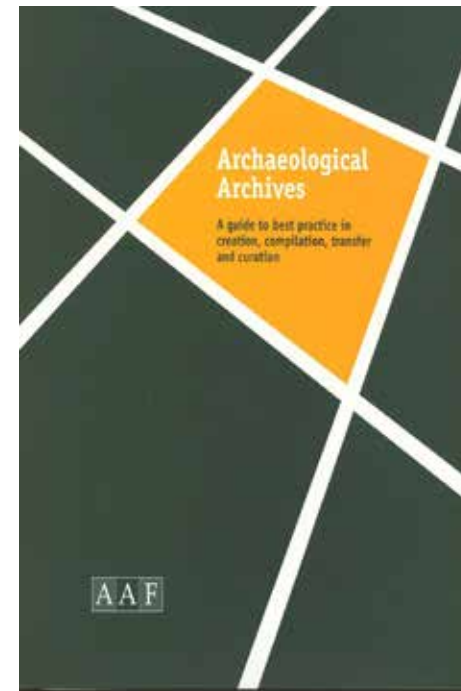


Archaeological Archives (2011)

<https://doi.org/10.5284/1000078>

## Summary of Standards

- Storage considerations
- Documentation within lifetime
- Standards: terminology, file-naming, format etc
- Standards: structured, preserved and accessed
- Plans for back-up and deposition in archive
- Virus free
- A digital archive index must be compiled and deposited, in digital form, with the digital archive
- Copies of digital archives should be deposited in a secure digital archiving facility where they can be curated properly, maintained for the future and accessed easily

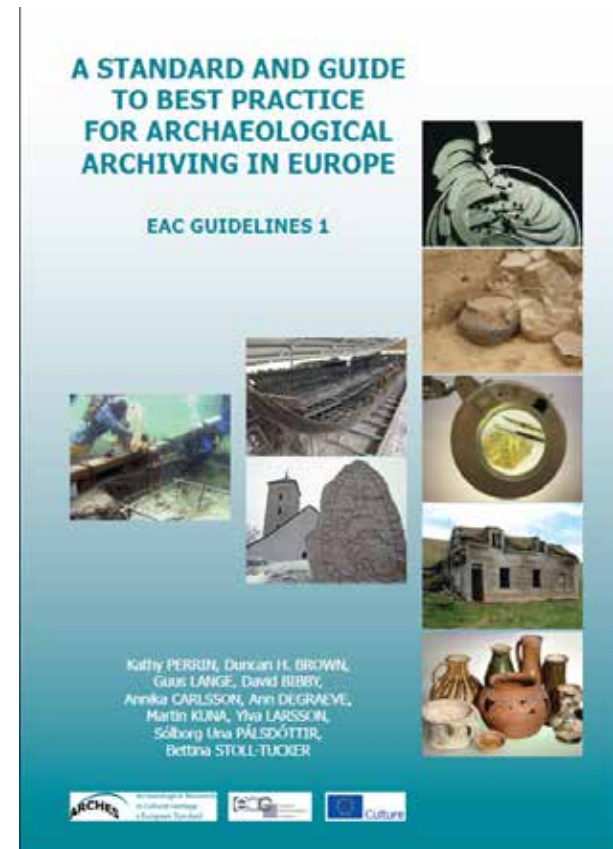


Archaeological Resources in Cultural Heritage a European Standard (ARCHES)

<http://archaeologydataservice.ac.uk/arches/>

Section 4 Definitions:

"An archaeological archive comprises all records and materials objects recovered during an archaeological project and identified for long term preservation, including artefacts, ecofacts and other environmental remains, waste products, scientific samples and also written and visual documentation in paper, film **and digital** form."

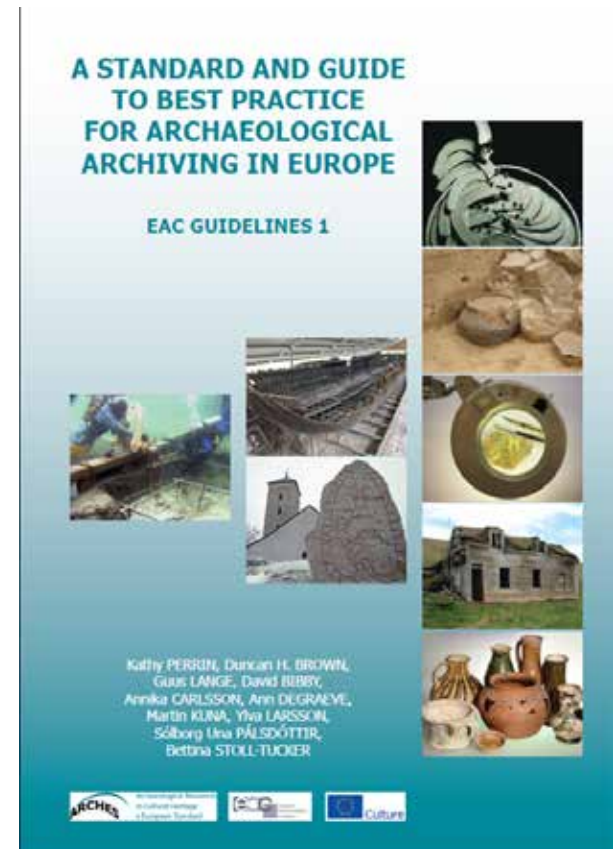


Archaeological Resources in Cultural Heritage a European Standard (ARCHES)

<http://archaeologydataservice.ac.uk/arches/>

Section 4.5 Standards:

- A digital backup strategy must be in place at the outset of a project and implemented throughout the project lifecycle
- Creation of the digital archive must be fully documented, with information such as software used, operating systems, types of hardware, dates, creators, field descriptions and the meanings of any codes
- ...
- The digital archive must be deposited in a Trusted Digital Repository





## CIDOC Archaeological Archives Standard

### Working Project Archive

All the documentation and physical items gathered during an archaeological project.

### Preserved Archive

Elements selected from the working project archive for curation beyond the duration of a project.

A key difference is that the responsibility for the maintenance of location information of archive elements will transfer from the archive creator to the curating institution.

International Committee for Documentation of  
the International Council of Museums (CIDOC)

**CIDOC  
Archaeological Archives Standard**



Produced by the ICOM/CIDOC Archaeological Sites Working Group

Draft 12

## Data Formats

- An important part of protecting your digital data is creating it a suitable format
- Data format or Data Type?



**Say NO to**



thealmightyguru.com

**Adobe Acrobat**



## Have a

"Cannot Open a database created with a previous version of your application" error in Access 2013 and Access 2016

Email

Print

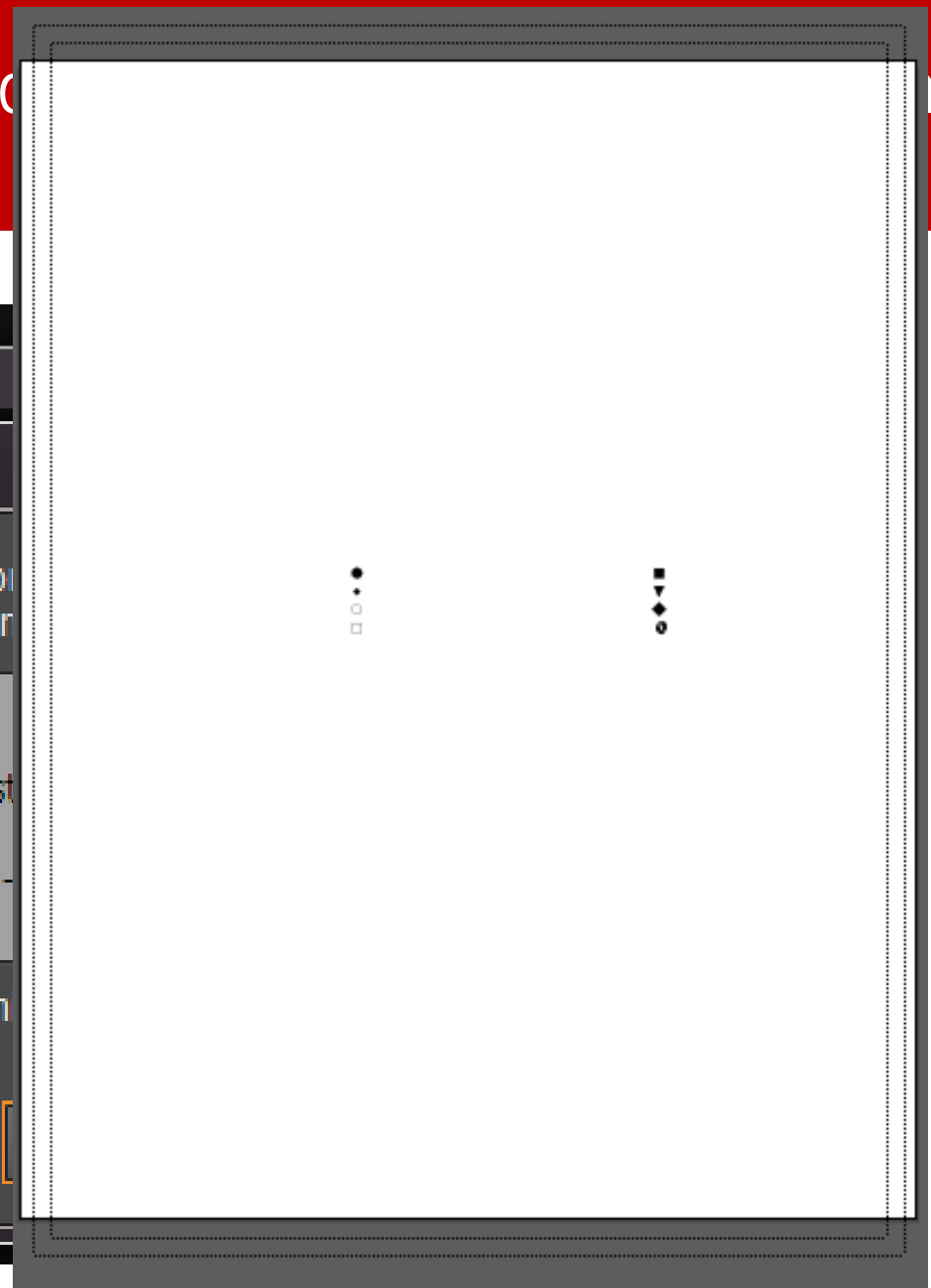
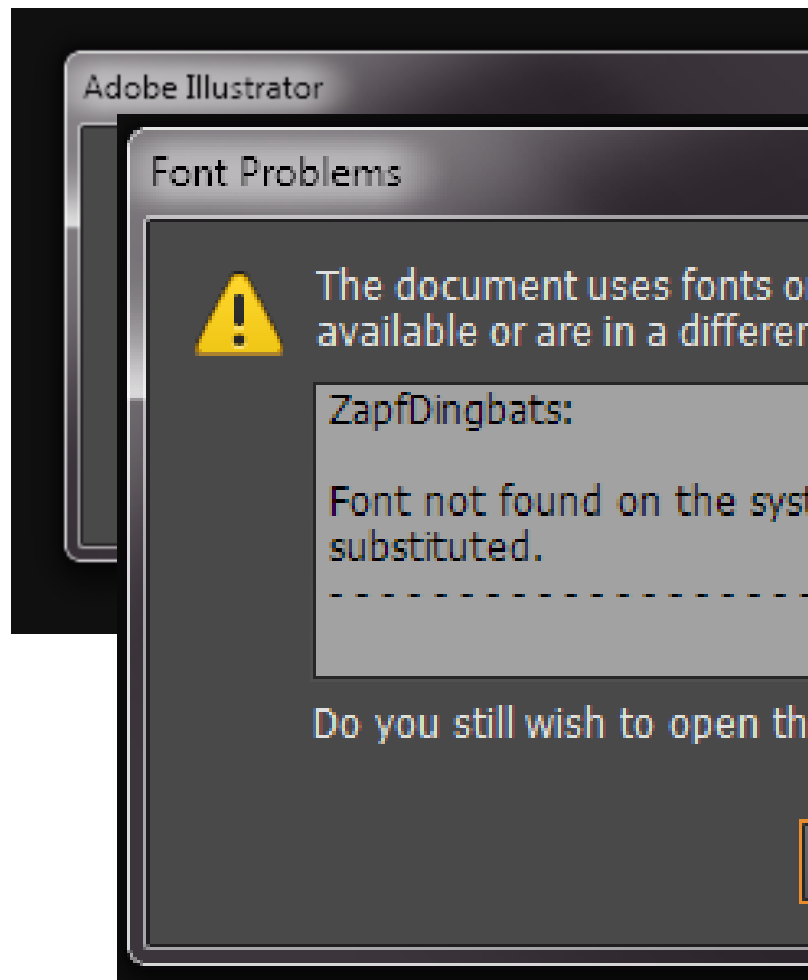
This issue occurs when you try to use Access 2013 or later version of Microsoft Access to open an Access 97 database. To work around this issue, use a pre-Access 2013 version of Access to save the Access 97 database as an .accdb file:

1. Open the Access 97 database in Access 2003.
2. On the Tools menu, click Database Utilities, click Convert Database, and then click to Access 2002-2003 file format.
3. Enter a name for the database, and then click Save.
4. Exit Access 2003.
5. Open the database in Access 2013 or later version of Access.
6. On the File tab, click Save As, select Access Database (\*.accdb), and then click Save As.
7. In the Save As dialog box, click Save.

## Cause

This issue occurs because recent versions of Access cannot convert Access 97 files.





## User Reviews

### Current Version

★★★★★  
out of 14 votes

5 star	<div><div></div></div>	4
4 star	<div><div></div></div>	0
3 star	<div><div></div></div>	0
2 star	<div><div></div></div>	0
1 star	<div><div></div></div>	10

### All Versions

★★★★★  
out of 14 votes

5 star	<div><div></div></div>	
4 star	<div><div></div></div>	
3 star	<div><div></div></div>	
2 star	<div><div></div></div>	
1 star	<div><div></div></div>	

Sort: Date ▼

★★★★★ "If you want to waste 10

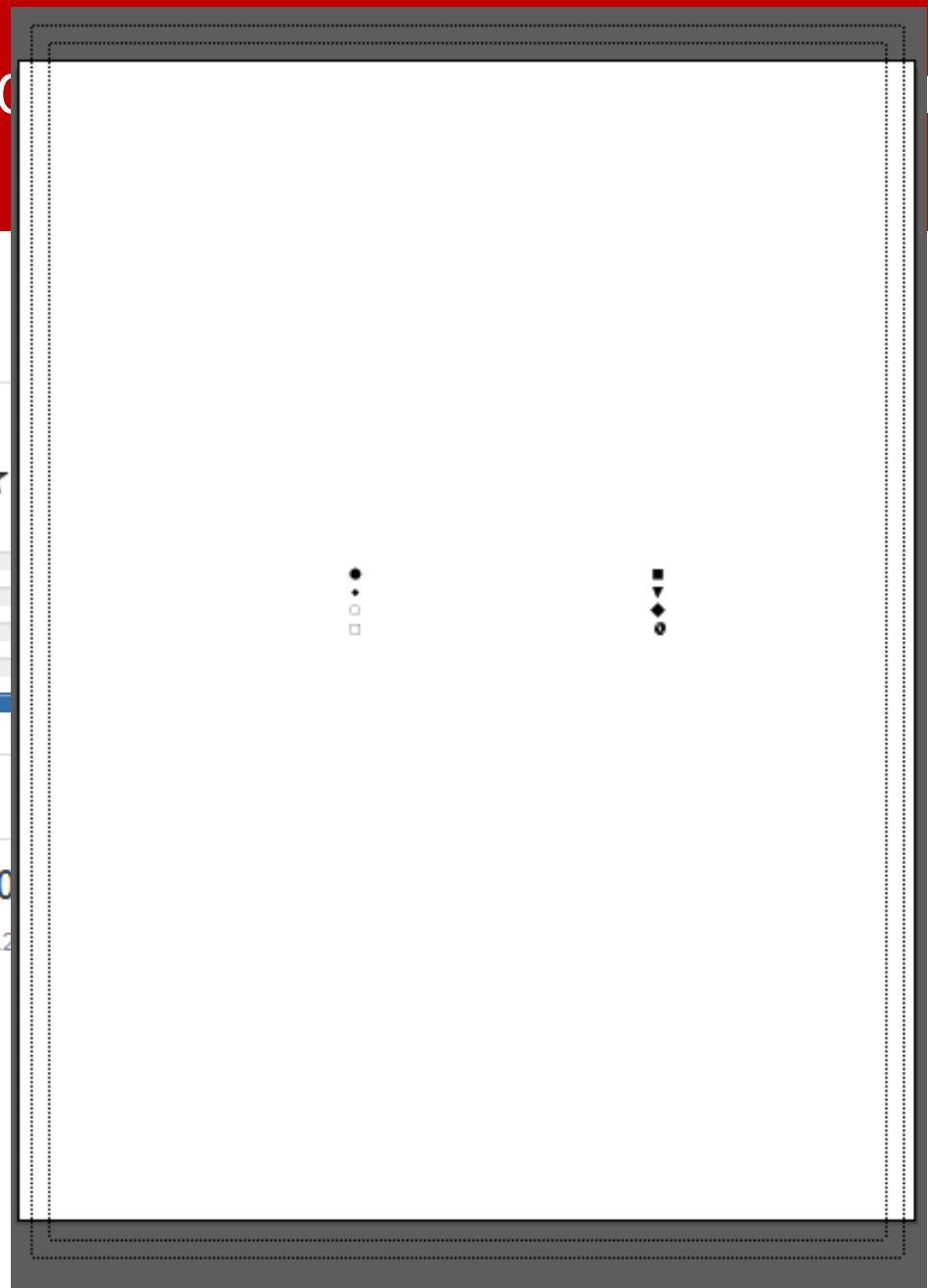
June 12, 2013 | By [uk-guy567](#) | Version: Ai Viewer 3.2

### Pros

None found

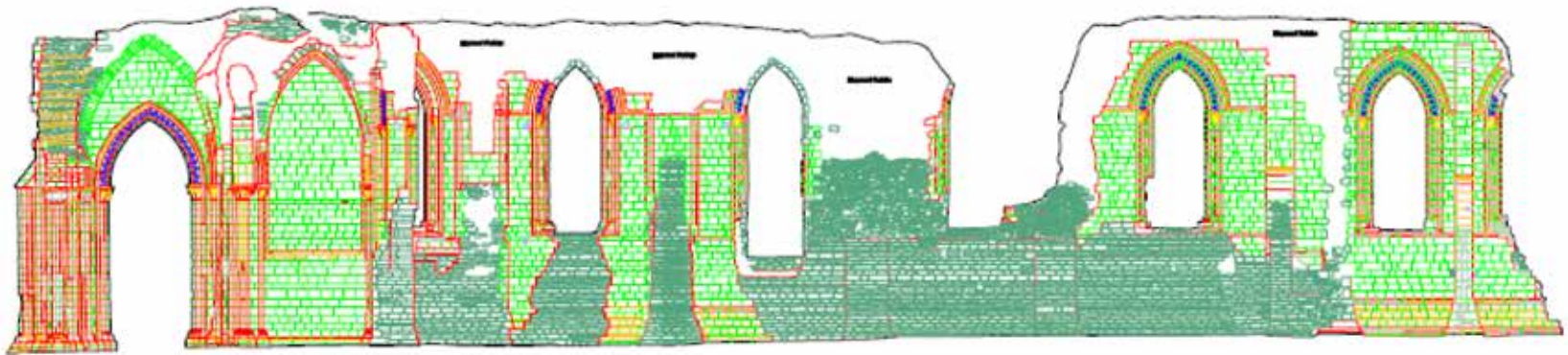
### Cons

Crashes on opening under Win7



## Data Formats

Obsolescence and concerns over proprietary software – who else is going to need to access it, do they have the software? access licence? etc



## Data Formats

### Guides to Good Practice

<http://guides.archaeologydataservice.ac.uk/g2gpwiki/>

- Digital Data (general)
- GIS
- CAD
- Geophysics
- AP & Remote Sensing
- Excavation & Fieldwork
- Virtual Reality



## Data Formats

ADS has list of recommended formats for deposition - **other repository's also have this**. Important to get it right the first time or you might spend ages converting files...

<http://archaeologydataservice.ac.uk/advice/FileFormatTable.xhtml>

**ads** ARCHAEOLOGY DATA SERVICE

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### GUIDELINES FOR DEPOSITORS

#### Preferred and Accepted File Formats

Data Type	Preferred File Format	Accepted File Format	Documentation
<b>3D Models, Visualisation, and Virtual Reality</b>	Depositors wishing to deposit 3D models or virtual reality are urged to contact us for information on appropriate formats and hardware		
<b>Audio</b>	<ul style="list-style-type: none"> <li>• Broadcast Wave Format (.wav)</li> <li>• Portable Audio (.mp3)</li> </ul>	<ul style="list-style-type: none"> <li>• Audio Interchange File (.aiff)</li> <li>• REX (.aif)</li> <li>• Mac (.aif)</li> </ul>	<ul style="list-style-type: none"> <li>• Software</li> <li>• Bit depth</li> <li>• Bit rate (kbps)</li> <li>• Sample rate (Hz)</li> <li>• Coding rate (Hz)</li> <li>• Coding delay</li> <li>• Length of recording (if not full)</li> <li>• Copyright ownership</li> <li>• Translations of metadata</li> </ul>
<b>CAD and Vector Graphics</b>	<ul style="list-style-type: none"> <li>• AutoCAD (.dwg) (2010 or later)</li> <li>• Standard Vector Graphics (.svg)</li> </ul>	<ul style="list-style-type: none"> <li>• Drawing Interchange Format (.dwt)</li> <li>• AutoCAD (.dwg) (2010 or earlier)</li> </ul>	<ul style="list-style-type: none"> <li>• See (1000000) template</li> <li>• Document of representations (style, colour, line type, hatch styles, symbols, etc)</li> <li>• Externally referenced files if suitable section format should be included and documented</li> </ul>
<b>Catalogues</b>	<ul style="list-style-type: none"> <li>• Comma-separated values (.csv)</li> </ul>	<ul style="list-style-type: none"> <li>• Obase (.xml)</li> <li>• OpenTable (.tbl)</li> <li>• Microsoft Access (.mdb)</li> <li>• Microsoft Excel (.xls/.xlsx)</li> <li>• OpenDocument Database (.odb)</li> <li>• Exchange format (.xml/.xml.gz)</li> </ul>	<ul style="list-style-type: none"> <li>• See (1000000) template</li> <li>• Document any codes and conventions used</li> <li>• Database should be accompanied by an entity relationship diagram</li> </ul>
<b>Geophysics</b>	<ul style="list-style-type: none"> <li>• Raw geophysics data (.dat/.geo)</li> <li>• GeoTIFF (.tif)</li> </ul>	<ul style="list-style-type: none"> <li>• Raw geophysics data (.dat/.geo)</li> </ul>	<ul style="list-style-type: none"> <li>• See (1000000) template</li> <li>• A geo-referenced TIFF image quality (with associated documentation, see (100) section) is also recommended</li> </ul>
<b>GIS</b>	<ul style="list-style-type: none"> <li>• ESRI Shapefile (.shp + .shx + .dbf and other associated files)</li> <li>• OpenStreetMap (.osm)</li> <li>• GeoTIFF (.tif)</li> <li>• Geo-referenced TIFF image (.tif + .xml)</li> </ul>	<ul style="list-style-type: none"> <li>• ArcInfo interchange (.aif)</li> <li>• Esri Shapefile Interchange Format (.shx + .xml)</li> </ul> <p><b>Raster:</b></p> <ul style="list-style-type: none"> <li>• GeoTIFF (.tif + .xml/.shx/.xml)</li> <li>• ESRI GRID (.asc/.img)</li> <li>• ESRI GRID Binary (.bnd)</li> <li>• JPEG 2000 (.jp2 + .xml)</li> <li>• PNG 2000 (.png + .xml)</li> <li>• Machine Readable Language (.xml)</li> </ul>	<ul style="list-style-type: none"> <li>• See (1000000) template</li> </ul>

## Data Formats

Guidance on Standards + Formats in new Guidelines for Best Practice (Historic England)

<https://historicengland.org.uk/images-books/publications/digital-image-capture-and-file-storage/>

Explains differences between TIF and JPG (for example)



### Digital Image Capture and File Storage

Guidelines for Best Practice





## Data Formats

Part of a much wider landscape!

Library of Congress Recommended Formats Statement

<https://www.loc.gov/preservation/resources/rfs/>

Digital Preservation Coalition

<https://www.dpconline.org/knowledge-base/tech-watch-reports>



# Creating a DMP: Some useful sources

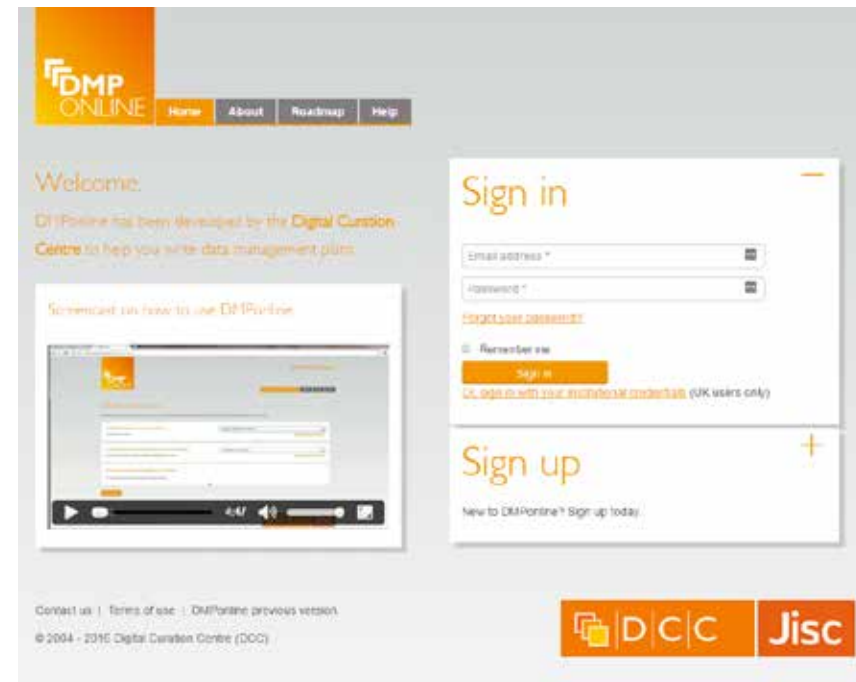


General guidance on data management and the creation of plans :-

<http://www.dcc.ac.uk/resources/data-management-plans>

DMP ONLINE

<https://dmponline.dcc.ac.uk/>



# Current Guidelines and Professional Standards



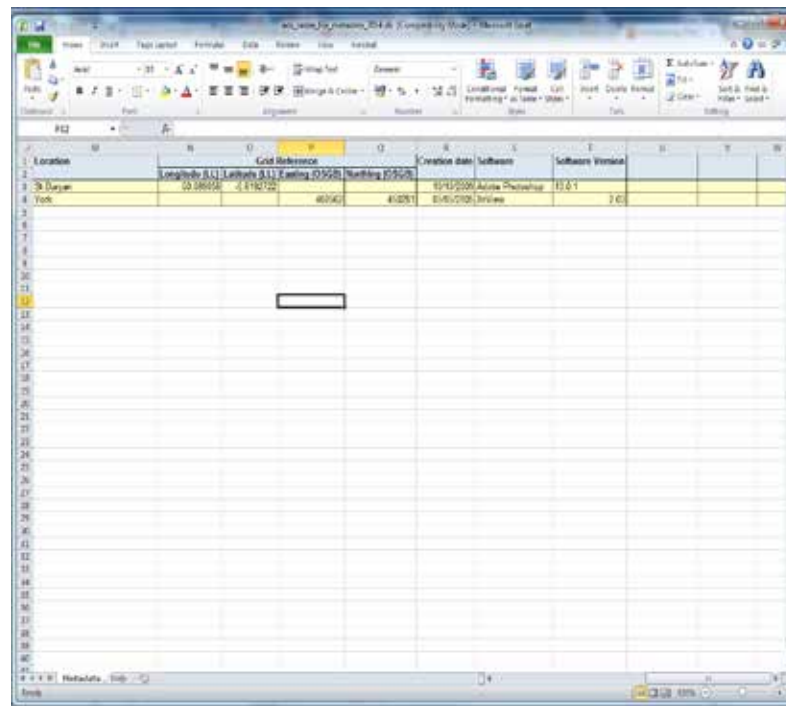
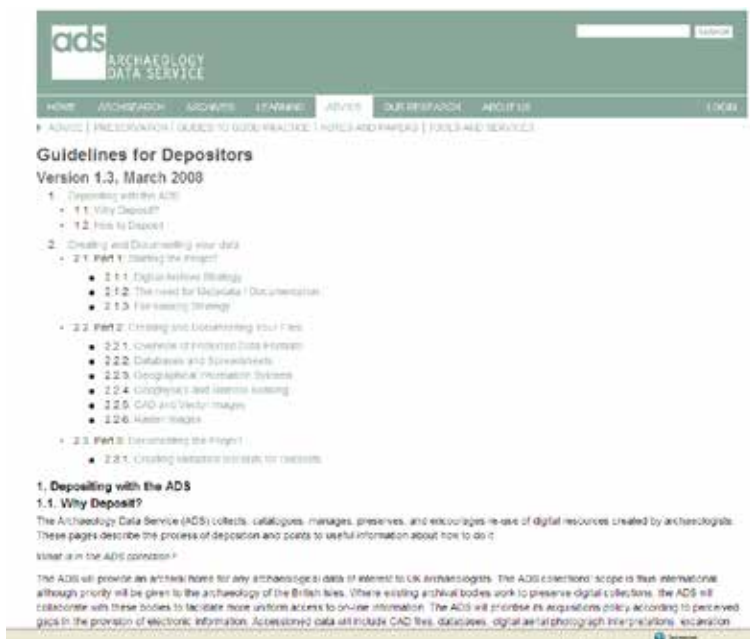
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e

# Current Guidelines and Professional Standards

## Metadata Templates

ADS has them for our purposes but they can be used and adapted by others even if not intending to deposit.

Packs will contain a image template example and a database template example





## Metadata Templates

Other repositories have them too!

<https://canmore.org.uk/content/depositors-information>

Project Information Form													
<b>Project Information</b>													
Organisation Name													
Project Name													
Project Code	Project Dates												
Project Manager	Type of Project (i.e. Watching Brief, Evaluation...)												
Sponsor/Client													
Site Name (and Address if appropriate)													
NGR	Canmore Site												
Council Area	Parish												
<table border="1"> <thead> <tr> <th colspan="3">Data form completed</th> </tr> <tr> <th>Organisations/individual depositing the material</th> <th>Name of project, Organisation Project Code (if available)</th> <th>Date form completed</th> </tr> </thead> <tbody> <tr> <td>Operating system Version</td> <td>Operating system Name</td> <td>Operating system Version</td> </tr> <tr> <td>Software Name(s) (include a application name &amp; version)</td> <td>File Extension</td> <td>Total Number of files submitted of this type</td> </tr> </tbody> </table>		Data form completed			Organisations/individual depositing the material	Name of project, Organisation Project Code (if available)	Date form completed	Operating system Version	Operating system Name	Operating system Version	Software Name(s) (include a application name & version)	File Extension	Total Number of files submitted of this type
Data form completed													
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Operating system Version	Operating system Name	Operating system Version											
Software Name(s) (include a application name & version)	File Extension	Total Number of files submitted of this type											
Filename	Full depositors pathway structure	Description of file's content	Linked file(s)	Technical documentation	Notes								

**CANMORE**  
Archives for the Archaeological Record

Part of Historic Environment Scotland



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## Depositors Information



To discuss depositing archive material, please contact the Acquisitions and Loans Manager at [archives@hls.scot](mailto:archives@hls.scot) or for an archive that comprises digital material, please contact the Digital Archives team at [digitalarchives@hls.scot](mailto:digitalarchives@hls.scot). For larger accessions, it may be necessary for HES staff to view the material in order to assess it and plan its transfer.

## Deposit agreements

A deposit agreement should be signed before a deposit of an archive is made. Physical ownership is transferred to HES and allows us to invest resources in digitisation and conservation of the deposited archive.

A deposit agreement means that ownership and all Intellectual Property Rights (IPR), including copyright, are assigned to HES. This allows us to make material accessible to researchers and to licence and sub-license the use of the material to users. Depositors would have a perpetual non-exclusive licence to use any copies of the material from the archive for their own use. If required, please contact us for further discussions regarding IPR.

If you have any questions about deposit agreements, please get in touch with the Acquisitions and Loans Manager at: [archives@hls.scot](mailto:archives@hls.scot)

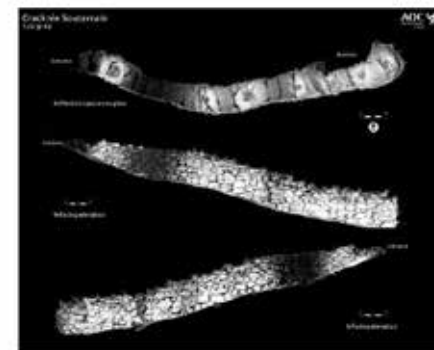
## Digital Archive material

Digital material includes anything that has been created in a digital format (i.e. is 'born' digital). This will include anything from digital photographs, reports, raw laser scanning or geospatial data, GIS data, CAD drawings or illustrations, and much more.

There are a number of ways you can deposit digital material such as via a CD, hard drive or memory stick, or you can transfer material to us via online file sharing software services such as Dropbox or OneDrive.

When depositing digital material with HES it should be separated from the physical archive. It is processed by us as a different unit and by a separate team. However, when you separate material, please be careful to make it clear which project your digital files are associated with. It takes us a significant amount of time to unpack and process digital material which has not been archived efficiently. Please use a clear folder structure and name files and photographs appropriately ensuring not to submit multiple copies of the same file (in duplicate files). If you are submitting photographs, please provide a photo index which includes a caption for each image you are archiving. If you find you have images which do not directly relate to the activity you undertook or site you recorded, please do not include them in your deposit. For instance, we do not normally retain images of vehicles, animals or people unless they are clearly relevant.

If you have any questions about what constitutes a digital deposit, are unsure what to include, or how to deposit data with us, please get in touch at: [digitalarchives@hls.scot](mailto:digitalarchives@hls.scot)





## Standardised Vocabularies



### About

#### Membership & current member organizations

Welcome to the *Forum on Information Standards in Heritage (FISH)*. This site presents the work of the forum and contains links to recommended information resources that support best practice in recording cultural heritage.

We hope the site will give you an overview of the different documentation guidance and indexing tools available and used by our members. Please help us keep the website current and update us on any additional or future resources, initiatives and conferences.



About Heritage Data ▾ Vocabulary Providers ▾ Resources ▾ Posts

### About Heritage Data

National cultural heritage thesauri and vocabularies have acted as standards for use by both national organizations and local authority Historic Environment Records but until now have lacked the persistent [Linked Open Data \(LOD\) URIs](#) that would allow them to act as vocabulary hubs for the Web of Data. The [AHRC](#) funded [SENESCHAL](#) project aims to make such [vocabularies available online](#) as Semantic Web resources. SENESCHAL will start with major vocabularies as exemplars and project partners will continue to make other vocabularies available. Other organizations are welcome to make use of the data and services which will be open licensed.

[RESTful web services](#) will be developed for the project to make the vocabulary resources programmatically accessible and searchable. These will include the provision to 'feed back' new terms (concepts) suggested by users. A series of case studies will explore use of these web services, in collaboration with the project partners.

## Digital Preservation Standards

### OAIS Model

- ISO standard 14721
- Established by the Consultative Committee for Space Data Systems (CCSDS)



### Core Trust Seal

- Merging of DSA and World Data System (WDS)
- Simple guidelines for data producers, repositories & users
- Accreditation Process



### NESTOR

- Extended self-assessment process based on the DIN 31644 standard "Criteria for trustworthy digital archives"



### ISO 16363 Audit