

Historic Environment Scotland

Guidelines for Archiving of Archaeological Projects

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Introduction

Historic Environment Scotland (HES) is the principal repository of drawings, photographs, and other material relating to the entirety of the Scottish built environment from the earliest times up to the present day. It is the repository for the documentary archive both paper and digital, from all archaeological projects funded by Historic Scotland, and is the primary repository for those funded by other sources. Its objective is to preserve this material for the future and to make the information available to the public. These guidelines are intended for all archaeologists, whether preparing an archive from an excavation or survey, a recent project or one from twenty years ago.

The archive comprises the complete documentary record of an archaeological project. The aim should be to produce a complete record of work undertaken, and the archive should be structured to allow the information to be understandable and readily accessible by those unfamiliar with the project. Considering the potential for reuse of information from the planning stages of a project onwards will aid in the production of a complete and coherent archive. HES staff will be happy to answer any questions about the deposit of archive material.

General Guidelines for Archive Preparation

- All archive submissions must be accompanied by a completed Project and Archive Information Form for each project. An example of a completed form has been included with these Guidelines as an appendix: a blank version can be downloaded from the Canmore website, under [depositor information](#).
- Archive submissions containing solely digital material must be accompanied by a Digital Deposit Form, available under depositor information on Canmore.
- Hybrid deposits (e.g. both physical and digital material) must be accompanied by both a Project and Archive Information Form and a Digital Deposit Form.
- Deposits should only include archive items in their original format except in the case of digital material created in file formats not included on the list of accepted file formats
- Archive material should be deposited in the format it was created where possible. HES does not require physical surrogates of digital objects. Exceptions to this rule are the inclusion of any publication images digitised from film or where the digital format is not supported by HES. If you are unsure of the format you should deposit in contact a member of HES Archives staff.
- All archive items should be marked with the project/site identifier where practical.
- The following items should be avoided when creating/preparing archive material as they can significantly decrease the lifespan of documents:
 - Metal fastenings such as paperclips and staples
 - Glue
 - Sticky labels and tape
 - Recycled paper

HES staff can provide advice on alternatives and other general conservation issues.

- If there are any items which have been damaged it is essential that no attempt is made to effect any repairs, unless by a trained paper conservator, so as to avoid any further damage.
- Where a document/digital file exists in several versions only the final (non-draft) version should be included. The final project report is the only exception to this rule, please see the 'Manuscripts' section for more information.
- Archive material should be packaged in suitable containers for transfer to HES so as to avoid any damage. Packaging material does not, however, have to be of archival quality as HES will repackage material for permanent storage after sorting and accessioning.
- If an archive contains sensitive material that is not suitable for public dissemination this should be discussed with HES staff before the material is deposited.
- Permission/licenses for the dissemination of any third party material by HES must be included with all archive deposits. Further information on Copyright is included later in this document.

Guidelines for Documentary Material

Drawings

- The following details must be annotated on drawings, preferably in the bottom right hand corner, alternatively the drawings may be numbered and the details listed on a separate sheet.
 - Site name
 - Project number or code
 - Date



- Brief description
- North point
- Scale
- Plan number
- Author
- Additional information about any redrawing or inaccuracy should also be noted, and a full description and other additional details should be included where relevant.

Photographic material

- The archive can include digital images, black and white negatives and/or prints, colour negatives and/or prints and colour slides.
- HES is happy to receive archives where the photographic component is wholly digital. Where images are captured digitally there is no need to deposit physical surrogates alongside the digital images.
- Colour slides may be copied for the archive but it is often helpful if two slides are taken of each subject in the field if the project director wishes to keep a personal set for lecturing purposes.
- All negative strips should be in numbered or labelled packets, preferably with a set of numbered prints or matching contact sheets.

Full details of all photographic material should be included in a descriptive list, and not on the reverse of the photograph.

Manuscripts

- This is a broad category including all site-books, day-books, draft reports, specialist reports, context and finds sheets/cards, matrices, computer print-outs, correspondence and miscellaneous administrative papers.
- All site-books should be clearly labelled with the site name, dates and area covered by book (if a large excavation). On no account should more than one project be recorded in one site-book.
- The first and final drafts of reports should be included and clearly labelled with the author's name, date and draft number. Intermediate drafts should only be kept if there are major differences in material content. Specialist reports should be treated in a similar manner.
- All other categories of documents should be fully identified. An index to accompany the manuscripts with a description of each item is desirable.

Guidelines for Digital Material

These guidelines are evolving in line with technologies. Check our website to ensure you adhere to the latest version of this document.

All archives should contain data items in a format acceptable to HES and comprise the following components.

1. Digital Deposit Form comprising both Archive Information and File Information
2. Technical Documentation (metadata form) where applicable
3. The data

What Information is Required?

Content selection criteria will vary from project to project and it is difficult to generalise, however as a guide:

- All texts and supporting images that may comprise a final report or publication should form the core of the deposit.
- Any supporting graphics that are embedded into a final report but which are also available in higher resolution or uncropped should be included as separate items.
- All raw (unprocessed) data relating to various specialist activities should be included where possible.
- If unprocessed data is not available in digital form, and provision cannot be made to scan it electronically, it can be supplied to HES as hardcopy. Adobe Portable Document Format (PDF/A-1a or PDF/A-1b) files are accepted. However, if possible, any constituents that go to make up the PDF file (e.g. TIFF files, Microsoft Word document) should be documented and supplied as well.

It is important to avoid duplication wherever possible. As a guide:

- Do not provide data items in more than one file format if their content is identical, unless the original format is known to be at risk.
- When submitting digital images avoid duplicate, near duplicate or extraneous images.
- Where a document exists in several versions, only supply the final (non-draft) version.
- Written correspondence (electronic or scanned hardcopy) relating to the project should not be included *unless* it represents a primary aspect of the project's brief or adds value.
- No material should be included that may be interpreted as being defamatory or libellous to any living person.

Digital Deposit Form

A completed Digital Deposit Form must accompany all digital material. The form is comprised of two tabs; Archive Information, and File Information. The Digital Archive will be unable to process your deposit without this form. Appendix B contains Digital Deposit Form. Copies of this form are available in MS Word or MS Excel format and can be obtained by emailing digital.archives@hes.scot or on the [Depositor Information](#) page on Canmore.

- The Archive Information tab is used to record project and archive summary information.
- The File Information tab is used to record basic file details for each item in the archive.
- Not all columns will be relevant; however, at a minimum, you should supply a very brief description of each file's content.
- Ensure you complete and submit this in electronic form.

Technical Documentation (metadata form)

Technical documentation is information about items, or groups of items, within the archive which will enable the data to be understood and reused by others. Technical documentation also encompasses documentation relating to third party material that may be embedded within the resource being deposited. Technical documentation (if applicable to your data) should be submitted with the archive in electronic form only.

Technical documentation can be very specialised in nature.

HES does not use or record formal data elements for technical documentation. A copy of depositors' technical documentation is stored with the archive and supplied to users when requested. It is the depositor's responsibility to ensure that the technical documentation is accurate and complete – HES will not verify or validate complex technical documentation.

A good source of practical advice for provision of technical documentation is the Archaeology Data Service (ADS) series of *Guides to Good Practice*. General guidelines relating to technical documentation for archaeological excavation and fieldwork are available at: <http://guides.archaeologydataservice.ac.uk/>

In the following sections we provide some guidance to depositors for common data types and links to additional guidance. Often, however, depositors themselves are best qualified to understand what information is required for proper technical documentation of their data.

Formats and Conventions

Media Formats

HES currently accepts digital archive in the following common media formats: CD-R; CD-RW; DVD-R; DVD-RW; and external hard disk. Alternatively, archive can be delivered by online file transfer method ShareFile: <https://hes-scotland.sharefile.eu/remotepupload/53b50da8-3d9e-404d-bb65-f8c13e718d87>. ShareFile transfer is the preferred method for online transfer, although email attachments can be accepted in exceptional circumstances only when emailed to digital.archives@hes.scot.

[Guidance on the HES ShareFile](#) system can be found on the Canmore website, under Depositor Information.

With limited exceptions, HES cannot routinely accept deposition of digital archive using: Iomega Zip discs; DLT, DAT, TK50 or QIC tape cartridges; CD-DA, CD+G, CD-I or CD-Text discs; unusual/outdated (e.g. 8" and 5.25") magnetic discs; or solid state storage devices.

HES would prefer to receive media formatted under (or for) the Microsoft Windows platform. Macintosh formatted media may be accepted in exceptional circumstances.

Avoid adhering gummed or sticky labels to the surface of CD-ROM. Use a water-based, non-permanent soft-pointed marker to write a minimum of information on the CD-ROM.

File Formats

Wherever possible, depositors should supply digital material in file formats that are listed in Appendix C, Recommended Formats. If this is not possible contact digital.archives@hes.scot for advice.

Appendix C provides a list of recommended file formats for a range of data types relating to archaeological activities. Bespoke text file formats developed by depositors for very specific and specialised purposes may be acceptable, provided that adequate information is supplied concerning the files' internal data structures.

Where the original format used is bespoke, very newly developed and/ or not widely accepted depositors may supply a single item in more than one format. Please indicate the duplication in the File Information tab (use the Description column), together with details of any data loss observed between format versions.

File and Directory Naming

HES does not have special requirements for file or directory names other than those imposed by popular operating systems. There are no formal requirements for the internal arrangement of, or maximum levels of nesting within, an archive's directory structures.

However, it is strongly suggested that:

- the period character ('.') is not used in directory names and is reserved for separating the file extension from the name.
- that the space character is not used in file or directory names (replace with the underscore character).
- Directory and file names may be upper, lower or mixed case.
- When naming files with consecutive numbers use the same number of characters throughout (i.e. for 1-100, use 001 to 100).
- File names do not exceed 90 characters.

Archive Ownership and Intellectual Property Rights

- HES requires that depositors transfer the physical ownership of archive material to the organisation via a signed Deposit Agreement to aid its successful curation.
- It is essential that the Intellectual Property Rights (including Copyright) of the archive are established, and any special conditions attached to material made clear at the time of deposition with HES.
- Intellectual Property Rights can be transferred to HES as part of the Deposit Agreement. If a depositor wishes to retain Intellectual Property Rights for the material they have created then a license must be signed to allow HES to disseminate material as per their advertised terms and conditions.
- Depositors must provide licenses for third party material allowing its dissemination by HES.
- In the event of an organisation holding copyright ceasing to exist, notification of this should be made to HES, as soon as possible, with details of any new arrangements.

Digital Archive Quarantine Statement

In order to comply with best practice and mitigate the risks involved in bringing in digital archive from external sources into our archive and network, we have implemented a Quarantine Area to identify and eliminate any malware threat.

All digital materials originating outside of the Historic Environment Scotland network will be subject to this quarantine procedure. In the case of malware or other malicious data being detected the depositor will be informed, and the digital accession will be disposed.

Further sources

- D Brown 2007 *Archaeological Archives: creation, preparation, transfer and curation* Archaeological Archives Forum
- K Walker 1990 *Guidelines for the preparation of excavation archives for long term storage*, UKIC Archaeology Section
- L Ferguson and D Murray 1996 *The Preparation, Curation and Storage of Archaeological Documentary Archives*, IFA Technical Paper
- J Owen (ed.) 1995 *Towards an accessible archaeological archive*, Society of Museum Archaeologists



Liaison

The staff of the HES Archives will be pleased to discuss individual requirements with project managers and are happy to advise or, indeed, make site visits if necessary. Please contact our curatorial staff through any of the following routes:

Post: HES Archives, John Sinclair House, 16 Bernard Terrace, Edinburgh, EH8 9NX.

Telephone: 0131 662 1456

Fax: 0131 662 1477

Email: archives@hes.scot or digital.archives@hes.scot



Appendix A: Sample Project and Archive Information Form

Project Information	
Organisation Name	
HKA Archaeology Ltd	
Project Name	
High Street, Glasgow	
Project Code	Project Dates
GLA0924	June 2007
Project Manager	Type of Project (i.e. Watching Brief, Evaluation...)
Dawn Marshall	Evaluation and Excavation
Sponsor/Client	
Historic Scotland	

Site Information		
Site Name (and Address if appropriate)		
Glasgow, High Street, Old College		
NGR	Canmore Site No.	Site Classification (i.e. Hut Circle)
NS 598 651	NS56NE 33	
Council Area	Parish	
Glasgow, City of	Glasgow	

Archive Contents – Primary Records			
Type of Record	No. of Items	Type of Record	No. of Items
Context Sheets	12	Photo Register	3
Context Register	1	Levels/Survey Record	
Finds Register		Site Notebooks	2
Sample Register		Finds Recording Sheets	
Drawings Register	1	Environmental Sheets	

Continues over page.

**Archive Contents – Photographic Materials**

Type of Record	No. of Films	No. of Photos/Slides
Colour Slides	1	36
Black and White Negatives	2	72
Black and White Contact Prints	2	72
Colour Negatives		
Colour Contact Prints		

Archive Contents – Reports

Type of Record	No. of Items	Type of Record	No. of Items
Project Report (First Draft)		Specialist Reports	2
Project Report (Final Draft)	1	C14 Certificates	
Gazetteers		Publication Offprint	

Archive Contents – Project Records

Type of Record	No. of Items	Type of Record	No. of Items
Brief	1	Planning Documents	1
WSI	1	Letters/emails	4
Other	6		

Archive Contents – Illustrations

Type of Record	No. of Items	Type of Record	No. of Items
Pencil Drawings	2	Inked Drawings	1
Annotated Maps	1	Finds Illustrations	
Developer's Plans	4		

Archive Contents – Location of Finds and Samples

Finds Repository	
Samples Repository	

Archive Contents – Digital Material (please also complete a Digital Deposit Form)

Number of Discs	8
Size (specify if KB, MB or GB)	2.4 MB



Appendix B: Sample Digital Deposit Form

Project Information	
Depositors Name/Organisation*	HKA Archaeology Ltd
Project Name*	Evaluation at High Street, Glasgow
Project Dates*	28/11/2020 – 10/12/2020
Type of Project*	Evaluation
Sponsor/Client	Historic Environment Scotland
Project Code	GLA0294
OASIS ID	archaeol20-277571

Site Information			
Site Name	Glasgow, High Street, Old College		
Council Area/Parish	Glasgow	NGR	NS 598 651
CANMORE Site ID(s)	44095	Site Classification	University (Period Unassigned)

Digital Archive Information			
Method of Transfer*	ShareFile		
Total Size of Deposit*	456 MB	Total Number of Files*	77

File Information		
Data Type	Example Formats	Included in Deposit? Mark X Applicable
Audio/Video	Waveform Audio (.wav), MPEG (.mpeg, .mpg, .mp3)	
Databases, Spreadsheets, Statistics	Comma Separated Values (.csv), Microsoft Excel (.xls/.xlsx), OpenOffice Calc 2.0 (.ods), Delimited text (.txt)	
Digital Photographs, Images (Raster)	Uncompressed Baseline TIFF v.6 (.tiff/.tif), Joint Photographic Expert Group (.jpeg/.jpg)	
Documents	Microsoft Word (.doc/.docx), OpenDocument Text (.odt), Portable Document Format (.pdf)	
Computer Aided Drawings (Vector)	AutoCAD (.dwg), Scalable Vector Graphics (.svg), Drawing Interchange Format (.dxf)	

Please proceed to complete the File Information Form below



Please ensure your deposit is organised in a clear and logical folder structure. Do not use 'spaces' in file names, use dashes (-) to delineate if required. Please use a new row per each file in the deposit, or you may use one row to describe a running series, e.g. a folder of photographs. Ensure you use multiple rows when describing material from more than one copyright holder in a folder.

Path/Folder	Title	Description of Contents	File Extension(s)	Date(s) of Creation	Copyright Holder	Linked Files/Notes	Number of Files
/SA143-Documentation/	Final Report, WSI, Finds Report	Project reports	.pdf	27/05/2020	Salford Archaeology LTD		3
/SA143-Documentation/ EnvironmentalAnalysis	Report	Environmental analysis report	.pdf	28/05/2020	EA Company LTD		1
/SA143- Photographs/16.05.20	DSC_100 - DSC_125, caption register	Evaluation photographs, Caption register	.tiff, .xlsx	16/05/2020	Salford Archaeology LTD	Caption register included	26
/SA143- Photographs/17.05.20	DSC_126 - DSC_157	Evaluation photographs	.tiff	17/05/2020	Salford Archaeology LTD	Caption included in primary register	37
/SA143-Drawings	SiteplanA	Site plan of Site A	.dwg	27/05/2020	Salford Archaeology LTD		1
/SA143-Drawings	SiteplanB	Site plan of Site B	.dwg	27/05/2020	Salford Archaeology LTD		1
/SA143-Drawings	Location plan	Master Location Plan	.dwg	27/05/2020	Salford Archaeology LTD		1
/SA143-Drawings	DX1245	Drawing of Building Rear	.dwg	27/05/2020	Salford Archaeology LTD		1
/SA143-Drawings	DX1246	Drawing of Outhouse	.dwg	27/05/2020	Salford Archaeology LTD		1
/SA143-Drawings	DX1247	Drawing of Building Front	.dwg	27/05/2020	Salford Archaeology LTD		1
/SA143-Survey	SA143-site	Shapefile of site location	.shp, .shx, .dbf, .prj	27/05/2020	Salford Archaeology LTD	Linked	4



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EACHDRAIDHEIL
ALBA

Field Name	Guidance and Notes on Contents
Path/Folder	Provide the location pathway of the file(s) within the deposit file structure, <i>e.g. SurveyData/RawData/Site1</i>
Title	Provide the filename(s) of the file(s), <i>e.g. SitePlan1 or DSC100100-100250</i>
Description of Contents	Provide descriptive information on the file contents, <i>e.g. Elevation of West front showing block doorway</i>
File Extension(s) -	Provide the file extensions of the file(s), <i>e.g. .JPEG, .TIFF</i>
Date(s) of Creation	Provide the date of creation of the file(s)
Copyright Holder	Please name the copyright owner of the file(s). Please ensure you have copyright clearance prior to depositing any files.
Linked Files/Notes	Name any files upon which this file depends on for content, but which are not embedded in the file itself, for component objects such as shape files. For CAD drawings, illustrations and another documents, please ensure all files are embedded and not linked.
Number of Files	Provide the number of files described in this row



Appendix C: Recommended File Formats

The following table lists all file formats that HES is currently capable of accepting. Preference will always be for open source non-proprietary file formats where possible. Other formats may be acceptable under certain circumstances, please contact digital.archives@hes.scot if you wish to submit data in formats other than those listed below.

		File Format (for Preservation)	Additional Documentation (if relevant/available)/Notes
Text	<i>Preferred</i>	Adobe Portable Document Format: .PDF, .PDF/A Microsoft Word: .DOCX	<ul style="list-style-type: none"> Documents must not be locked to editing or password protected.
	<i>Accepted</i>	Microsoft Word: .DOC OpenDocument Text: .ODF Plain Text: .TXT Rich Text Format: .RTF	
	<i>Not Accepted</i>	.HTML, .XHTML, .XML, SGML	
Images	<i>Preferred</i>	Tagged Image File Format (Uncompressed): .TIF/.TIFF Adobe Digital Negative: .DNG	<ul style="list-style-type: none"> Captions must be included for all image files Images must be at least 1200 pixels along longest edge. Images must have a resolution of at least 72dpi. Images must be in the correct orientation
	<i>Accepted</i>	Joint Photographic Expert Group: .JPG/JPEG Portable Network Graphics: .PNG Windows bitmap: .BMP	
	<i>Not Accepted</i>	Proprietary Camera Raw Files: .CRW, .CR2, .CAP, .CAPTURE, .3FR, .3F, .DCR, MOS, .NEF, .IIQ	
Audio / Visual	<i>Preferred</i>	Video MPEG-4: .MP4 Audio .MP3 MPEG-4: .MP4 Waveform Audio File: .WAV	
	<i>Accepted</i>	Video MPEG-2: .MP2 Audio Video Interleaved: .AVI Quicktime: .MOV MPEG: .MPG/.MPEG Disk Image: .ISO	
	<i>Not Accepted</i>	Apple Video Format: .M4V	
CAD (Vector Graphics)	<i>Preferred</i>	Scalable Vector Graphic: .SVG AutoCAD: .DXF	<ul style="list-style-type: none"> Captions must be included for all graphics files Images must be embedded into final versions and not linked Accompanying file for dissemination purposes can be
	<i>Accepted</i>	Adobe Illustrator: .AI AutoCAD: .DWG	



	<i>Not Accepted</i>	<p>Corel Photopaint bitmap: .CPT</p> <p>Autodesk Web Format Drawing: .DWF</p> <p>Enhanced Windows Metafile Drawing: .EMF</p> <p>Enhanced Postscript Drawing: .EPS</p> <p>Windows Metafile Drawing: .WMF</p>	submitted as an image or PDF
Spreadsheets	<i>Preferred</i>	<p>Comma Separated Value: .CSV</p> <p>Microsoft Excel: .XLSX</p>	<ul style="list-style-type: none"> Column/Rows should have clear labels describing their contents A key should be provided for any codes with the data Spreadsheets must not be locked to editing or password protected
	<i>Accepted</i>	<p>Microsoft Office: .XLS</p> <p>OpenDocument Spreadsheet: .ODS</p> <p>Plain Text: .TXT</p>	
	<i>Not Accepted</i>	<p>Excel Workspace Document: .XLW</p> <p>Symbolic Link (SYLK): .SLK</p> <p>Lotus 1-2-3 Worksheet: .WKS</p> <p>List File: .LST</p> <p>Microsoft Works Spreadsheet: .XLR</p>	
Databases	<i>Preferred</i>	Delimited Text: .CSV	<ul style="list-style-type: none"> A data dictionary should be included where available For delimited text the delimiters should be listed Databases must not be locked to editing or password protected
	<i>Accepted</i>	<p>Microsoft Access: .ACCDB</p> <p>OpenDocument Database: .ODB</p> <p>Database File: .DBF</p>	
	<i>Not Accepted</i>	Microsoft Access: .MDB	
GIS	<i>Preferred</i>	<p>ESRI Shapefile: .SHP, .SHX, .DBF (optional: .SBN and .SBX, .FBN and .FBX, .AIN and .AIH, .PRJ and .XML)</p> <p>Geodatabase: .CSV (plus shapefile)</p> <p>Zipped Folder: .ZIP</p>	<p>Project specific metadata form must be completed when depositing GIS data.</p> <ul style="list-style-type: none"> Accompanying flat file data can be provided as .csv or .xlsx or .txt. GIS shapefiles will be zipped together for preservation and dissemination purposes. This will be carried out by digital archive staff at ingest or can be deposited as .ZIP. Accompanying file for dissemination purposes can be submitted as an image or .PDF
	<i>Accepted</i>	<p>GeoJSON: .GEOJSON</p> <p>MapInfo: .MID and .MIF</p>	
Geophysics	<i>Preferred</i>	<p>Raw data: .CSV</p> <p>Rendered Images: .TIF/TIFF</p>	<p>Project specific metadata form must be completed when depositing Geophysics data.</p> <p>For raw xyz data:</p> <ul style="list-style-type: none"> Location of the survey Conditions Instrumentation <p>For rendered images:</p> <ul style="list-style-type: none"> Details of data processing and interpretation
	<i>Accepted</i>	<p>Raw data: .TXT, .DAT, .XYZ, .TOP,</p> <p>Rendered Images: .JPG/JPEG, .PNG (see above)</p>	
	<i>Not Accepted</i>	<p>Raw data: Geophysics Data File: .DT1, .HD</p> <p>Extended Triton Format: .XTF</p>	



3D Models / Photogrammetry	<i>Preferred</i>	Raw Data: .TIF/TIFF Derivatives: .OBJ	Project specific metadata form must be completed when depositing 3D models or Photogrammetry data.
	<i>Accepted</i>	Raw Data: .JPG/JPEG Derivatives: .X3D	
Lidar		<i>Work in progress – please contact Digital.Archives@hes.scot to discuss depositing LIDAR data.</i>	