Plan Overview

A Data Management Plan created using DMPonline

Title: An Archaeological Excavation of Cromwell House and The Manor House, Royal Fort Gardens, Bristol

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Template: University of Bristol General Template

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Project abstract:

The Department of Anthropology and Archaeology, University of Bristol, will undertake a three-week training and research excavation within the Royal Fort Gardens, Bristol. The project focuses on the site of Cromwell House, a 17th-century domestic structure thought to overlie or abut the southern boundary of the Civil War Royal Fort constructed under Prince Rupert in 1643.

Unlike other areas of the Royal Fort, Cromwell House and its surrounding landscape remain poorly documented, with limited archival material and unarchived excavations from 2001 providing only partial evidence. The present investigation aims to clarify the structural and chronological relationship between the fortifications and later post-Civil War occupation, testing aerial and geophysical anomalies that may correspond to the fort wall and associated features.

Excavation will be conducted to current CIfA standards, with continuous photogrammetric recording, stratigraphic excavation, and detailed artefact recovery. Results will be integrated with previous University and BaRAS investigations to enhance the archaeological record of the site.

The project contributes to the South West Archaeological Research Framework by advancing understanding of Civil War defences, their reuse, and their transformation into domestic and landscaped spaces. Outcomes will include a digital archive, public outreach events, and a comprehensive excavation report forming part of an ongoing University research and teaching programme.

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An Archaeological Excavation of Cromwell House and The Manor House, Royal Fort Gardens, Bristol

Project Summary

Provide a brief description of the project and the research being carried out. State if the research is part of a larger project, if there are any funders involved, and how data fits in.

This project comprises a three-week archaeological research and training excavation conducted by the University of Bristol's Department of Anthropology and Archaeology within the Royal Fort Gardens, Bristol. The excavation focuses on the site of Cromwell House, a 17th-century domestic structure situated on or near the southern boundary of the Civil War Royal Fort constructed under Prince Rupert in 1643.

The project forms part of the Department's ongoing Royal Fort research programme, which integrates excavation, survey, and archival research to investigate the transformation of St Michael's Hill from a military stronghold to an 18th-century landscaped estate. It also supports undergraduate field training and contributes to the University's wider teaching and research strategy.

The research is fully funded by the University of Bristol through departmental fieldwork and teaching budgets. The project will generate stratigraphic, spatial, artefactual, and environmental datasets, including digital photogrammetric models, plans, photographs, and excavation records. These data will form a comprehensive digital and physical archive deposited with the University of Bristol Data Repository (data.bris) and, where appropriate, with the Archaeology Data Service (ADS) to ensure long-term accessibility and preservation.

All data generated by the project will be owned and managed by the University of Bristol: Department of Anthropology and Archaeology. The Department's Collections Manager will oversee long-term curation under the Department of Anthropology and Archaeology Collections (DAAC) accession system, ensuring compliance with University and sector data management standards.

Data Types

What types of data will be involved?

The data collected and produced will be the following:

- Geospatial survey data:
  - Total Station and/or GNSS GPS data.
  - UAV data.
  - Find and excavation data.
  - Geophysical survey data.
  - Created geospatial data from plans.
- Vector Drawings:
  - Plans and sections of buildings and trenches where applicable.
  - Harris Matrix for excavations where applicable.
  - Extended Harris Matrix for reconstructions.
  - Drawings of artefacts.
- Raster Images:
  - Photographs from UAV surveys.
  - Photographs from terrestrial surveys and excavations.
  - Photographs of artefacts.
  - Rendered images of reconstructions.
- Documents:
  - Reports from invasive and non-invasive archaeological work.
  - Reports from lighting analysis.
  - Reports form photogrammetry surveys.
  - Reports from structural analysis.
  - Reports from terrestrial and aerial surveys.
  - Reports of reconstruction paradata.
- Tabular data:
  - Database of building and landscape survey data.
  - Database of excavation and find data
  - Results from structural analysis.
  - Results from lighting analysis.
  - Calibration data for Photogrammetry.
  - Metadata for files.
  - File tree data for project folder.
- Three-Dimensional Reconstructions and Records
  - Three-dimensional model files.
  - Texture files for three-dimensional models.

What file formats will be used?

Data will be stored, recorded, and organised according to the best practices outlined by the Archaeology Data Service (ADS) for the storage and archiving of digital data, including raster and vector data, geophysical data, geospatial data, three-dimensional data, and alpha-numeric documentary data.

Data Type	Archival File Types
Alpha-numerical data	Plain Text (.txt) Delineated Text (.csv)
Documentary data that may consist of just text, or text and pictures.	Plain Text (.txt) Portable Document Format (.pdf/A)
Raster imagery data	Tag Image File Format (.tiff) Portable Network Graphics(.png) Adobe Digital Negative(.dng)
Vector imagery data	Scalable Vector Graphics (.svg) Portable Document Format (.pdf/A) Drawing Exchange Format (.dxf) Graph Modelling Language (.xgml)
Geodatabase	Shapefiles (.shp) [this is accompanied by up to eleven reference files that are equally archival] Delineated Text (.csv) GeoTIFF (.tiff)
Three-Dimensional models (Records or Reconstructions)	Wavefront (.obj) Stereolithography (.stl)
Code	R Code (.R)
Compressed Files	.zip
Metadata & Paradata	Delineated Text (.csv) Plain Text (.txt) Portable Document Format (.pdf/A)

What will be the approximate size of the files?

- 0 - 50 GB

Data Type	Estimated File Size (Uncompressed)
Alpha-numerical data	< 02 GB
Documentary data that may consist of just text, or text and pictures.	< 02 GB
Raster imagery data	< 20 GB
Vector imagery data	< 05 GB
Geodatabase	< 05 GB
Three-Dimensional models (Records or Reconstructions)	< 40 GB
Metadata & Paradata	< 01 GB
Total (Uncompressed)	< 75GB
Total (Compressed)	~ 35 GB

Data Capture

How will the data be generated and/or gathered?

Data will be generated through a combination of archaeological excavation, survey, and recording activities conducted in accordance with the Chartered Institute for Archaeologists (CIfA) *Standards and Guidance for Excavation* (2023). All excavation will be recorded stratigraphically using context sheets, drawings, written registers, and digital datasets.

Spatial data will be gathered using GNSS and total station survey equipment to record georeferenced points, plans, and sections tied to Ordnance Survey National Grid and Datum (OSGM15/OSTN15). Photogrammetric recording will be employed throughout the excavation to produce detailed 3D models of features, deposits, and trenches. UAV (drone) imagery will supplement site documentation where permitted.

Artefactual data will be recorded through context-based cataloguing, with small finds and samples individually logged and spatially referenced. Environmental and soil samples will be collected, processed, and recorded following Historic England guidelines.

Supporting datasets, including geophysical survey results, aerial imagery, and historic mapping, will be integrated into a unified GIS environment (QGIS/ESRI) to facilitate spatial analysis. All data will be captured digitally in open, non-proprietary formats where possible (e.g. .CSV, .TIFF, .DNG, .OBJ, .PDF/A) and linked to the project's DAAC accession record for consistency and long-term management.

Data Storage and Preservation

How will the data be backed up?

All data will be stored in The University of Bristol Research Data Storage Facility (RDSF), which provides secure, long-term storage for research data. This major investment provides nightly backup of all data, with further resilience provided by three geographically distinct storage locations. A tape library is used for backup purposes and also for long-term, offline data storage. Only authorised users can access data stored within the RDSF. The RDSF is managed by Bristol's Advanced Computing Research Centre (ACRC) which has a dedicated steering group and a rigorous data storage policy (https://www.acrc.bris.ac.uk/acrc/RDSF_policy.pdf). The RDSF upholds and reinforces Bristol's wider Information Security Policy(www.bris.ac.uk/infosec/policies/docs/isp-01.pdf).

Do you have security procedures in place for sensitive data?

No sensitive research data is anticipated for collection.

What are your plans for long-term storage of the data?

Once archived all data will be stored in The University of Bristol Research Data Storage Facility (RDSF), which provides secure, long-term storage for research data. This major investment provides nightly backup of all data, with further resilience provided by three geographically distinct storage locations. A tape library is used for backup purposes and also for long-term, offline data storage. Only authorised users can access data stored within the RDSF. The RDSF is managed by Bristol's Advanced Computing Research Centre (ACRC) which has a dedicated steering group and a rigorous data storage policy (https://www.acrc.bris.ac.uk/acrc/RDSF_policy.pdf). The RDSF upholds and reinforces Bristol's wider Information Security Policy(www.bris.ac.uk/infosec/policies/docs/isp-01.pdf).

Data Organisation

How will data be organised?

Primary Folder - Level One	Level Two	Level Three	Level Four	Level Five	Level Six	Contents description
3D_MODELLING						Three-Dimesnional Models
	PROJECT FOLDER					The top-level folder containing all the files relating to a three-dimensional reconstruction model.
		EXPORTED MODELS				Three-dimensional model assets produced for the reconstruction.
			#0			
				CAMERAS		Cameras used for rendering, lighting analysis, and modelling from georeferenced photos.
				LIGHTS		Light sources (including the sun) for rendering and lighting analysis.
			REF_DIGI			Reference material, specifically digital records (i.e., laser scan models or photogrammetry models).

				REF_CAD		Reference material, a linked CAD file.
				REF_DIGI		Reference material, specifically digital records (i.e., laser scan models or photogrammetry models).
				REF_HUMAN		A folder for a reference human.
				REF_GEOREF		A folder for georefrenced data
			LANDSCAPE			The reconstructed landscape surrounding the model which had previously not been able to be reconstructed.
				PHASE01		The Phase reconstructed.
			COMPONENTS			The folder containing all non-reconstruction related meshes.
				PHASE01_STRUCTURE		Structural meshes named with their BIM name and Extended Matrix name
					STRUCTURE_STRUCTURAL AREA REINFORCEMENT_AREAREIN	
					STRUCTURE_STRUCTURAL BEAM SYSTEMS_STRUCTURALFRAMINGSYSTEM	
					STRUCTURE_STRUCTURAL COLUMNS_STRUCTURALCOLUMNS	
					STRUCTURE_STRUCTURAL CONNECTIONS_STRUCTCONNECTIONS	
					STRUCTURE_STRUCTURAL FABRIC REINFORCEMENT_FABRICREINFORCEMENT	
					STRUCTURE_STRUCTURAL FOUNDATIONS_STRUCTURALFOUNDATION	
					STRUCTURE_STRUCTURAL FRAMING_STRUCTURALFRAMING	
					STRUCTURE_STRUCTURAL PATH REINFORCEMENT_PATHREIN	
					STRUCTURE_STRUCTURAL REBAR_REBAR	
					STRUCTURE_STRUCTURAL STIFFENERS_STRUCTURALSTIFFENER	
					STRUCTURE_STRUCTURAL TRUSSES_STRUCTURALTRUSS	
				PHASE01_ARCHITECTURE		Architectural meshes with their BIM name and Extended Matrix name
					ARCHITECTURE_CASEWORK_CASEWORK	
					ARCHITECTURE_CEILINGS_CEILINGS	
					ARCHITECTURE_COLUMNS_COLUMNS	
					ARCHITECTURE_DOORS_DOORS	
					ARCHITECTURE_FASCIAS_FASCIA	
					ARCHITECTURE_FLOORS_FLOORS	
					ARCHITECTURE_FURNITURE_FURNITURE	
					ARCHITECTURE_GUTTERS_GUTTER	
					ARCHITECTURE_LANDING_STAIRSLANDINGS	
					ARCHITECTURE_RAILINGS_RAILING	
					ARCHITECTURE_RAILINGS_STAIRSRAILING	
					ARCHITECTURE_RAILINGS_RAILINGS	
					ARCHITECTURE_RAMPS_RAMPS	
					ARCHITECTURE_ROADS_ROADS	
					ARCHITECTURE_ROOF SOFFITS_ROOFSOFFIT	
					ARCHITECTURE_ROOFS_ROOFS	
					ARCHITECTURE_ROOMS_ROOMS	
					ARCHITECTURE_STAIRS_STAIRSRUNS	
					ARCHITECTURE_STAIRS_STAIRS	
					ARCHITECTURE_SUPPORT_STAIRSSUPPORTS	
					ARCHITECTURE_SUPPORTS_RAILINGSUPPORT	
					ARCHITECTURE_TERMINATIONS_RAILINGTERMINATION	
					ARCHITECTURE_WALL SWEEPS_CORNICES	
					ARCHITECTURE_WALLS_WALLS	
					ARCHITECTURE_WINDOWS_WINDOWS	
				OTHER		Items that fit outside the Architectural or Structural BIM family, with their BIM name and Extended Matrix name.
					OTHER_PIPE ACCESSORIES_PIPEACCESSORY	
					OTHER_PIPE FITTINGS_PIPEFITTING	
					OTHER_PIPE INSULATIONS_PIPEINSULATIONS	
					OTHER_PIPES_PIPES	

					OTHER_PIPES_PIPECURVES	
					OTHER_PIPING SYSTEMS_PIPINGSYSTEM	
		MATERIAL LIBRARIES				Image files used for materials and textures of meshes within 3Ds Max.
		RENDER OUTPUT				The output location for all rendered images.
		RENDER PRESETS				A folder to store preset settings for render engines within 3Ds Max.
		SCENE ASSETS				Additional assets used for refrence or help.
			IMAGES			Image files used specifically for rendering or to aid in the alignment of cameras for rendering.
				ANIMATIONS		Animations stored as single frames produced from the reconstruction model.
				IMAGES		Images of rendered scenes of the reconstruction model.
	STRUCTURAL ANALYSIS STUDY FOLDER					The top-level folder containing all the files relating to a three-dimensional model.
		EXPORT				Parts and assemblies that are to be exported back into the Technical Model reconstruction.
		IMPORT				Models to be imported into inventor after changes or adaptations to the structure has been made in response to structural analysis.
		PARTS				The parts used to create the assemblies.
		ASSEMBLIES				The assemblies and studies saves.
		REPORTS				Results stored as .csv files and images.
	LIGHTING STUDY FOLDER					
		MODELS				
		RESULTS				
			DATA			
			FIGURES			
3D_RECORDING						Three-dimensional representations of archaeological data comprising of vectors, points, and meshes.
	POINT-CLOUDS					Three-dimensional representations of archaeological data as point clouds.
	MODELS					Three-dimensional representations of archaeological data as meshed models.
	CONTROL POINTS					Control points used to georefrence and align three-dimensional representations of archaeological data.

	CALIBRATIONS					Calibarations used to align photgraphs for three-dimensional representations of archaeological data.
DATA_DATABASE						
DATA_GEODATA						
	DATA_SHAPEFILES					Data usually imported as tables from
		EXCAVATION				Point, line, and polygon data relating to or gathered from excavations. This will typically not include features such as masonry walls or building/room points as these are also produced out of the trench.
		GEOGRAPHY				Point, line, and polygon data relating to the local geography including place names, building outlines (unless surveyed), rivers and roads.
		GEOLOGY				Point, line, and polygon data relating to underlying geology, geological features. This does also include soil data.
		SURVEY_PROCESSED				Point, line, and polygon data representing masonry features, building surveys, drawing locations and any measured or measurable data that is created that does not fit in the above categories.
		SURVEY_RAW				Point, line, and polygon data representing the working datasets directly output from survey instruments. The processed data can be considered the 'master' copy used for analysis.
		GRIDS				Point and polygon data relating to the site grid.
	DATA_RASTERS					Raster data from surveys
		RASTER_DTM				Generated DTM data, either as DSM or DEM data
		RASTER_ORTHOPHOTOS				Rectified photography (orthographic aerial)
DATA_GEOPHYSICS						Geophysics data.
	GEOPHYSICS_PROJECT#					Geophysics project file.
		DATA_GEOPHYSICS				Data of geophysical project.
			WORKING FILES			Working data files for the project, usuauly processed data.
			PRESERVATION FILES			Raw output data from geophysical survey.
			IMAGE FILES			Images of processed geophysical data.
		DOCUMENTS_GEOPHYSICS				Project documents and reports
			PROJECT NOTES			Notes from fieldsurvey if applicable

			PROJECT REPORT			Report of geophyscial survey
		METADATA_GEOPHYSICS				Data to aid in the understanding of the geophysical survey
			METADATA_GEOPHYSICS			Individual Survey metadata
			GEODATA_GEOPHYSICS			Geolocation information for the project
			METADATA_PROJECT			Project metadata
			METADATA_FILEDESCRIPTION			Outline of files in project.
DATA_SURVEY						Structured records of archaeological data often stored as tabular data contained within discrete files or organised within databases, geodatabases.
	SURVEY_PROCESSED					Point, line, and polygon data representing masonry features, building surveys, drawing locations and any measured or measurable data that is created that does not fit in the above categories.
	SURVEY_RAW					Point, line, and polygon data representing the working datasets directly output from survey instruments. The processed data can be considered the 'master' copy used for analysis.
DOCUMENTS_FIELDWORK						Formalised longform textual content or primary textural records relating to archaeological data either of digital origin or digitised from physical records.
	MASONRY					Formalised longform textual content or primary textural records relating to masonry data either of digital origin or digitised from physical records.
	EXCAVATION					Formalised longform textual content or primary textural records relating to archaeological data either of digital origin or digitised from physical records.
	BUILDING					Formalised longform textual content or primary textural records relating to building survey data either of digital origin or digitised from physical records.
DOCUMENTS_REPORTS						Reports relating to the project and project data.
	REPORTS_SEASONAL					Seasonal project reports
	REPORTS_BUILDING					Specialist reports on building surveys
	REPORTS_ANALYSIS					Reports of any analysis or studies undertaken on project data

	REPORTS_3D					Repots of threedimensional records
	REPORTS_CATALOGUES					Catalogues of finds or other collections of data
VECTOR_CAD						CAD drawings of features.
VECTOR_TECHNICAL						Fomalised drawings exported and produced from CAD or GIS tools of topography, built structures, or excavations.
VECTOR_ILLUSTRATIONS						Drawings of artefacts or worked stones or other archaeological data.
RASTER_ARTEFACTS						Photography of artefacts and other recovered archaeological data
RASTER_SITEPHOTOS						Photography of sites, surveys, and excavations
RASTER_UAV						Photography from UAV surveys
RASTER_PHOTOGRAMMETRY						Photography from terrestial photogrammetry surveys
RASTER_RECTIFIED						Rectified photography

Data Documentation and Description

What documentation will you keep?

Data will be stored, recorded, and organised according to the best practices outlined by the Archaeology Data Service (ADS) for the storage and archiving of digital data, including raster and vector data, geophysical data, geospatial data, three-dimensional data, and alpha-numeric documentary data.

Project Level Metadata

Human Name	Metadata Name	General Description
Project Title	PROJECT_TITLE	The title (and any alternatives such as site codes) for the dataset.
Description	PROJECT_DESCRIPTION	A brief summary of the main aims and objectives of the research project from which the data collection arose together with a brief summary description of the content of the dataset.
Subject	PROJECT_SUBJECT	Keywords for the subject content of the dataset (qualified using controlled terms such as those supplied by the Forum on Information Standards in Heritage (FISH))

Coverage	PROJECT_COVERAGE	This is both spatial and temporal coverage. For spatial coverage it should include the current and contemporary name(s) of the country, region, county, town or village covered by the data collection and, where possible, a standardised reference should be used. If names or administrative units were different during the time period covered by the data they should be recorded separately. Site coordinates can also be entered as a National grid reference in a number of different ways e.g., as a point (useful to describe a small project area via a central coordinate); as a line (e.g., at least two coordinates to represent the linear limits of the site); as a polygon (for a more complex site area, three or more coordinates are used to describe the boundaries). If applicable, the full postal code for the site can be included. For temporal coverage it should include the dates/period covered by the dataset (using existing thesauri where possible such as the Forum on Information Standards in Heritage (FISH) Period List).
Projection System	PROJECT_PCS	Projected Coordinate System used.
Coordinate System	PROJECT_GCS	Geographic Coordinate System used.
Creators	PROJECT_ CREATORS	Details of the creator(s), compiler(s), funding agencies, or other bodies or people intellectually responsible for the data collection. Information should include forename, surname, affiliation, address, phone, fax, email, or URL.
Publisher	PROJECT_PUBLISHER	Details about any organisation which has published this data.
Contributors	PROJECT_CONTRIBUTORS	Other individuals or organisations who have contributed to the resource.
Identifiers	PROJECT_PROJECTID	Project or reference numbers or site codes used to identify the dataset.

Dates	PROJECT_DATES	Dates indicating when the dataset was created, when the archaeological project was carried out, processing dates, or computerisation dates as appropriate.
Copyright	PROJECT_COPYRIGHT	The name of the copyright holder for the dataset. If the collection was created during work by an employee, the copyright holder will normally be the employer. If the material is covered by a specific copyright (e.g., Crown copyright) please indicate this.
Relations	PROJECT_RELATIONS	If the data collection was derived in whole or in part from published or unpublished sources, whether printed or machine-readable, this element should include references to the original material, details of where the sources are held and how they are identified there (e.g., by accession number). If the collection is derived from other sources include an indication of whether the data represents a complete or partial transcription/copy and the methodology used for its digitisation. Also include full references to any publications about or based upon the data collection.
Language	PROJECT_LANGUAGE	Indication of which language(s) the dataset is in (e.g., English, French, Spanish).
Resource Type	PROJECT_TYPE	Whether the dataset is best described as primary data, processed data, an interpretation of data, or a final report.
Format	PROJECT_FORMAT	The formats the data within the project is saved in (e.g., WordPerfect 5.1, HTML, AutoCAD).

General File Level Metadata.

Human Name	Metadata Name	General Description
File Name	FILE_NAME	The name of the file e.g., report.doc
File Format	FILE_FORMAT	The file format e.g., PDF/A or Open Office Document
File Location	FILE_LOCATION	The file path i.e. directory and filename e.g., /adsdata/cottam_ba/jpg/fwking_plan.jpg
Software Name	FILE_SOFTWARE	The software used to create the file e.g., Microsoft Word 2007
Hardware used	FILE_HARDWARE	The hardware used to create the file, this is more significant when files are created directly by survey equipment such as laser scanners or GPS devices.
Operating System Used	FILE_OPSYS	The operating system under which the file was made e.g., Windows XP or Mac OS X 10.5.
Date of Creation	FILE_CREATED	When the file was made.
Date of Last Update	FILE_UPDATED	When the file was updated.
Linked Files	FILE_LINKED	This element should be used to highlight relationships between files.
Identifiers	FILE_IDENTIFIER	This element should be used to highlight whether a file is a source file or derived from another.
Creator	FILE_CREATORS	The file path i.e. directory and filename e.g., /adsdata/cottam_ba/jpg/fwking_plan.jpg.
Copyright	FILE_COPYRIGHT	Details of copyright or other rights and holder details.

Raster & Vector File Metadata.

Human Name	Metadata Name	General Description
Title	FILE_TITLE	The title of the image or a suitable caption.
Description	FILE_DESCRIPTION	Description of the image.
Coverage	FILE_COVERAGE	Site location and description. The address, or coordinates for the subject and a description of the subject. Coverage should also include any relevant period terms.
Projection System	FILE_PCS	Projected Coordinate System used.
Coordinate System	FILE_GCS	Geographic Coordinate System used.
Keywords	FILE_KEYWORDS	Keywords e.g., period, site or feature terms. Use suitable thesauri where they exist.
File Format and Version	FILE_VERSION	e.g., TIFF 6.0.
File Size	FILE_SIZE	Size of the file in bytes.
Resolution	FILE_RESOLUTION	The resolution of the image measured in pixels per inch (ppi).
Dimensions	FILE_DIMENSIONS	Dimensions of the image in pixels e.g., 400 x 700px.
Colour Space	FILE_COLOUR	The colour space used in the image e.g., RGB or grayscale.
Bit Depth	FILE_BITDEPTH	e.g., 24bit or 8bit.

Three-Dimensional Record File Level Metadata.

Human Name	Metadata Name	General Description
Subject	FILE_SUBJECT	Keywords for the subject content of the dataset (qualified using e.g., the English Heritage NMR Monument Type Thesaurus or the MDA Object Type Thesaurus.
Intended accuracy	FILE_Accuracy	The originally intended accuracy or scale that the survey was to achieve.
Coverage	FILE_COVERAGE	Site location and description. The address, or coordinates for the subject and a description of the subject. Coverage should also include any relevant period terms.
Projection System	FILE_PCS	Projected Coordinate System used.
Coordinate System	FILE_GCS	Geographic Coordinate System used.
Keywords	FILE_Keywords	Keywords e.g. period, site or feature terms. Use suitable thesauri where they exist.
Dates	FILE_DATES	Dates indicating when the dataset was created, when the archaeological project was carried out, processing dates, or computerisation dates as appropriate.
Identifiers	FILE_PROJECTID	Project or reference numbers or site codes used to identify the dataset.
Resolution	FILE_RESOLUTION	The resolution of the image measured in pixels per inch (ppi).
Dimensions	FILE_DIMENSIONS	Dimensions of the image in pixels e.g., 400 x 700px.
Colour Space	FILE_COLOUR	The colour space used in the image e.g., RGB or grayscale.
Bit Depth	FILE_BITDEPTH	e.g., 24bit or 8bit.

Three-Dimensional Record Control Point Metadata.

Human Name	Metadata Name	General Description
Coordinates	CONTL_X, CONTL_Y, CONTL_Z,	List the three-dimensional coordinates for each control point.
Covariance	CONTL_CX, CONTL_CY, CONTL_CZ	Provide full correlation if available (from survey adjustment or GPS baseline solution), otherwise provide estimated standard deviation or variance of each coordinate.
Location	CONTL_Location	Textual description of location.
Dates	FILE_DATES	Dates indicating when the dataset was created, when the archaeological project was carried out, processing dates, or computerisation dates as appropriate.
Identifiers	FILE_PROJECTID	Project or reference numbers or site codes used to identify the dataset.
Coverage	FILE_COVERAGE	Site location and description. The address, or coordinates for the subject and a description of the subject. Coverage should also include any relevant period terms.
Projection System	FILE_PCS	Projected Coordinate System used.
Coordinate System	FILE_GCS	Geographic Coordinate System used.

Geographical Information System File Metadata.

Human Name	Metadata Name	General Description
Scale	FILE_SCALE	Scale/resolution of data capture, e.g., 1:1250
Method	FILE_Method	Method of original data capture, e.g., Total Station Survey, etc.
Dates	FILE_DATES	Dates indicating when the dataset was created, when the archaeological project was carried out, processing dates, or computerisation dates as appropriate.
Identifiers	FILE_PROJECTID	Project or reference numbers or site codes used to identify the dataset.
Coverage	FILE_COVERAGE	Site location and description. The address, or coordinates for the subject and a description of the subject. Coverage should also include any relevant period terms.
Projection System	FILE_PCS	Projected Coordinate System used.
Coordinate System	FILE_GCS	Geographic Coordinate System used.
Identifiers	FILE_PROJECTID	Project or reference numbers or site codes used to identify the dataset.
Resolution	FILE_RESOLUTION	The resolution of the image measured in pixels per inch (ppi).
Dimensions	FILE_DIMENSIONS	Dimensions of the image in pixels e.g., 400 x 700px.
Colour Space	FILE_COLOUR	The colour space used in the image e.g., RGB or grayscale.
Bit Depth	FILE_BITDEPTH	e.g., 24bit or 8bit.

Three-Dimensional Model File Metadata.

Human Name	Metadata Name	General Description
Number of Vertices	FILE_VERT	The number of vertices (points) in the model
Number of Polygons	FILE_POLY	The number of triangles or polygons in the model
Geometry Type	FILE_GEOMTYPE	The type of geometry used within the model (wire frame, parametric, etc. if applicable).
Scale	FILE_UNITSCALE	What scale is represented by 1 unit.
Coverage	FILE_COVERAGE	Site location and description. The address, or coordinates for the subject and a description of the subject. Coverage should also include any relevant period terms.

Projection System	FILE_PCS	Projected Coordinate System used.
Coordinate System	FILE_GCS	Geographic Coordinate System used.
Basic, Technical, or Extended	FILE_TYPE	Is the model the master model produced just after raw data processing, or is it a derived model produced from the master (e.g. after hole filling, simplification, smoothing, etc.)?
Level of Detail	FILE_LOD	How detailed is the model, what is the resolution of the scan.
Layers	FILE_LAYERS	Does the model use layers? How many?
Colour and Texture	FILE_TEXTURES	Does the model contain colour or texture information? How is this stored? If raster texture files are used then these have to be archived separately.
Material	FILE_MATERIAL	Information about the material properties of the model and whether they match the physical properties of the actual object.
Light Source(s)	FILE_LIGHT	Number and accuracy of light sources used in the model.
Shader	FILE_SHADER	Have special or extended shaders been used?
Animation	FILE_ANIMATION	Whether animation is used in the model along with description of type (keyframe, motion capture).

Will you be using any metadata standards?

Data will be stored, recorded, and organised according to the best practices outlined by the Archaeology Data Service (ADS) for the storage and archiving of digital data, including raster and vector data, geophysical data, geospatial data, three-dimensional data, and alpha-numeric documentary data.

Data Sharing and Publication

What data do you plan to share?

Data will be published through the University of Bristol Research Data Repository (data.bris). The data.bris. Each deposit is accompanied by appropriate metadata and is assigned a unique Digital Object Identifier (DOI) via the DataCite scheme. All data published by the Repository is available under a permissive re-use license.

Are there any ethical, commercial, legal or IPR issues which might apply when publishing your data?

No.

How will your data be shared?

Data will be published through the University of Bristol Research Data Repository (data.bris). The data.bris Repository offers a means for Bristol's researchers to openly share non-confidential research data, without the need for external data users to undergo any form of authentication. Each deposit is accompanied by appropriate metadata and is assigned a unique Digital Object Identifier (DOI) via the DataCite

scheme. All data published by the Repository is available under a permissive re-use license.

Will there need to be controlled access procedures in place for your data?

No.

Planned Research Outputs

Dataset - "Digital Site Archive"

A complete digital archive of excavation data, including context records, drawings, plans, 3D photogrammetric models, survey datasets, digital photographs, and associated metadata. This archive will be deposited with the University of Bristol Data Repository (*data.bris*) and, where appropriate, with the Archaeology Data Service (ADS) for long-term curation and open access.

Report - "Grey Literature Report"

A fully illustrated, peer-reviewed excavation report will be produced, incorporating stratigraphic analysis, artefact and environmental assessments, and contextual interpretation. This will be submitted to the Bristol Historic Environment Record (HER) and uploaded to ADS and the University's Research Repository (*Pure*).

Publication - "Research Paper"

A research paper drawing together University-led excavations from 2001–2025 will be prepared for submission to the *Transactions of the Bristol and Gloucester Archaeological Society.*

Collection - "Physical Archive"

All paper records, registers, drawings, and retained finds or samples will be accessioned into the Department of Anthropology and Archaeology Collections (DAAC) under a designated accession number for permanent curation.

Event - "Society Lecture (Bristol Avon Archaeology Society)"

Lecture delivered to the Bristol and Avon Archaeological Society (BAAS), disseminating excavation results and promoting engagement with Bristol's post-medieval archaeology.

Conference paper - "Conference Presentation (Bristol and Gloucestershire Archaeological Society Archaeology Conference)"

Presentation of results at the Bristol and Gloucestershire Archaeological Society Archaeology Conference, highlighting the Cromwell House findings within the wider regional research framework.

Event - "Community Engagement Activities"

Public tours led daily by students and staff during the excavation, introducing the site's history and archaeological context. Activities include displays of artefacts from University excavations and guided interpretation of active trenches.

Collaboration with Bristol Grammar School and Willow Park C of E Primary School to align excavation-related activities with curriculum objectives. This may include classroom talks, visits, and opportunities for controlled handling or cleaning of finds within the Department.

A traditional University outreach event featuring guided tours, children's activities, and "mini excavations" to engage staff, families, and visitors with the excavation process and its findings.

Planned research output details

Title	DOI	Type	Release date	Access level	Repository(ies)	File size	License	Metadata standard(s)	May contain sensitive data?	May contain PII?
Digital Site Archive		Dataset	Unspecified	Open	data.bris Research Data Repository	25 GB	Creative Commons Zero v1.0 Universal	None specified	No	No
Grey Literature Report		Report	Unspecified	Open	data.bris Research Data Repository ADS		Creative Commons Zero v1.0 Universal	None specified	No	No
Research Paper		Publication	Unspecified	Open	ADS data.bris Research Data Repository		None specified	None specified	No	No
Physical Archive		Collection	Unspecified	Open	None specified		Creative Commons Zero v1.0 Universal	None specified	No	No
Society Lecture (Bristol Avon Archaeology Society)		Event	Unspecified	Open	None specified		None specified	None specified	No	No
Conference Presentation (Bristol and Gloucestershi ...		Conference paper	Unspecified	Open	None specified		None specified	None specified	No	No
Community Engagement Activities		Event	Unspecified	Closed	None specified		None specified	None specified	No	No