

---

## Plan Overview

*A Data Management Plan created using DMPonline*

**Title:** Project Nivica Archaeology

**Creator:** ALEX BIRKETT

**Principal Investigator:** Aisling Tierney

**Data Manager:** Aisling Tierney, Alex Birkett

**Project Administrator:** Aisling Tierney, Alex Birkett

**Contributor:** Alex Birkett

**Affiliation:** University of Bristol

**Template:** University of Bristol Postgraduate Template

**ORCID iD:** 0000-0003-0829-5045

### Project abstract:

Project Nivica Archaeology, a key component of the broader 100+ Fshatrat initiative in Albania, focuses on archaeological exploration and community development in the Kurvelesh region, specifically around the village of Nivica. This project integrates cutting-edge three-dimensional recording and reconstruction techniques from the planning stage through the entire lifecycle of archaeological investigations.

The project's primary aim is to uncover and understand the influence of coastal Illyrian and Epirote cultures on the material culture of the inland mountain regions, challenging contemporary notions of isolation and connectivity. It seeks to unravel how Nivica's inhabitants have historically shaped their identity in response to various external powers, including the Epirote Republic, the Roman Empire, and the Ottoman Empire. Beyond its archaeological focus, Project Nivica Archaeology aligns with the United Nations Sustainable Development Goals, promoting heritage practice and community engagement.

Another aspect of the project is to study the built landscapes of the upper Kurvelesh region, with a focus on the villages of Nivica and Rexhin with an aim to produce three-dimensional reconstructions centred on a domestic structure damaged in the First Balkan War in the old village of Nivica or 'Kala' site.

Operating since spring 2018, the project is supported by a collaboration of international and local institutions and community leaders. Despite challenges posed by global events, the project continues to contribute significantly to the cultural and historical understanding of the Upper Kurvelesh region, while also fostering community development and sustainable heritage management in line with the United Nations Sustainable Development Goals.

**ID:** 137960

**Start date:** 19-06-2016

**End date:** 20-11-2023

**Last modified:** 13-11-2023

### Copyright information:

The above plan creator(s) have agreed that others may use as much of the text of this plan as they would like in their own plans, and customise it as necessary. You do not need to credit the creator(s) as the source of the language used, but using any of the plan's text does not imply that the creator(s) endorse, or have any relationship to, your project or proposal

# Project Nivica Archaeology

## Project Summary

Provide a brief description of the project and the research being carried out. State if research is part of a larger project, department(s) and funders involved and where data fits in.

Project Nivica Archaeology, a key component of the broader 100+ Fshatrat initiative in Albania, focuses on archaeological exploration and community development in the Kurvelesh region, specifically around the village of Nivica. This project integrates cutting-edge three-dimensional recording and reconstruction techniques from the planning stage through the entire lifecycle of archaeological investigations. The project's primary aim is to uncover and understand the influence of coastal Illyrian and Epirote cultures on the material culture of the inland mountain regions, challenging contemporary notions of isolation and connectivity. It seeks to unravel how Nivica's inhabitants have historically shaped their identity in response to various external powers, including the Epirote Republic, the Roman Empire, and the Ottoman Empire. Beyond its archaeological focus, Project Nivica Archaeology aligns with the United Nations Sustainable Development Goals, promoting heritage practice and community engagement. Another aspect of the project is to study the built landscapes of the upper Kurvelesh region, with a focus on the villages of Nivica and Rexhin with an aim to produce three-dimensional reconstructions centred on a domestic structure damaged in the First Balkan War in the old village of Nivica or 'Kala' site. Operating since spring 2018, the project is supported by a collaboration of international and local institutions and community leaders. Despite challenges posed by global events, the project continues to contribute significantly to the cultural and historical understanding of the Upper Kurvelesh region, while also fostering community development and sustainable heritage management in line with the United Nations Sustainable Development Goals.

## 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 from 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 size of the files?

Data Type	Estimated File Size (Uncompressed)
Alpha-numerical data	< 01 GB
Documentary data that may consist of just text, or text and pictures.	< 01 GB
Raster imagery data	< 40 GB
Vector imagery data	< 05 GB
Geodatabase	< 05 GB
Three-Dimensional models (Records or Reconstructions)	< 40 GB
Metadata & Paradata	< 01 GB
<b>Total (Uncompressed)</b>	< 90 GB
<b>Total (Compressed)</b>	~ 54 GB

## Data Storage and Preservation

### How will the data be stored and kept safe?

Data prior to processing will be stored on University of Bristol SharePoint servers with two off-site backup of all 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](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](http://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-Dimensional 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 georeferenced 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_ROOF SOFFIT	
					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 reference 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 georeference and align three-dimensional representations of archaeological data.
	CALIBRATIONS					Calibrations used to align photographs 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, usually 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 geophysical 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 textual records relating to archaeological data either of digital origin or digitised from physical records.
	MASONRY					Formalised longform textual content or primary textual records relating to masonry data either of digital origin or digitised from physical records.
	EXCAVATION					Formalised longform textual content or primary textual records relating to archaeological data either of digital origin or digitised from physical records.
	BUILDING					Formalised longform textual content or primary textual 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					Reports of three-dimensional 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 terrestrial 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).

## Data Sharing

### What are your plans for publishing data?

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.

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

There are no commercial, legal or IPR issues with publishing this data, and no ethical issues relating to human participants or identifiable information of individuals.

The location spots of finds of local and potentially national importance have, however, been provided in two formats. The first is a general location, simplifying the find-spot to 100m, and is available for the public. Precise find-spots have been restricted on a request basis.