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## Plan Overview

*A Data Management Plan created using DMPonline*

**Title:** Importing Gothic technology in a Byzantine territory: the cross vaults of Saint Sophia in Frankish Andravida, Greece

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**Template:** UoE Default DMP template for Research Staff

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### Project abstract:

The proposed study will record and document the ruins of the enigmatic 13th-century church of St Sophia in Andravida, Peloponnese. It is the sole remain of medieval Andreville, capital of the Frankish Principality of Morea and the finest example of Gothic architecture in Greece. Nevertheless, its singular architectural character remains largely unrecorded and understudied, and currently at risk due to extended earthquake damage. A detailed digital survey and analysis of its remains will allow this project to document the church's form, structure and construction phases, setting the base for a larger research project on the building culture of the Morea.

**ID:** 135329

**Start date:** 01-07-2024

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**Grant number / URL:** <https://rse.org.uk/funding-collaboration/award/rse-research-collaboration-grants/>

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# Importing Gothic technology in a Byzantine territory: the cross vaults of Saint Sophia in Frankish Andravida, Greece

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## Administrative Information

### 1) School or Institute

- CAHSS - Edinburgh College of Art

Staff member at the Edinburgh School of Architecture and Landscape Architecture.

### 2) Project start date

2024-07-01

### 3) Project end date

2025-05-31

### 4) Project funder or sponsor.

Dumbarton Oaks

Byzantine Project Grant application

<https://www.doaks.org/research/fellowships-and-awards/project-grants>

## Data Collection

### 5) Data Collection

Data on the ruined church of St. Sophia in Andravida and the vaults in Chlemoutsi Castle, both in Greece, will be collected by 3D laser scanning (Leica BLK 360) and by a drone by our team. These are point clouds often accompanied by synchronously taken photos of the area scanned so that a rendered surface can be obtained for visualisation, navigation and possible virtual reconstructions. Videos and photos taken by drone will be useful for aerial views of the monuments in Andravida to show details that usually do not appear in the literature. Photos of jpg format, is relatively high resolution will be of medium size. Point cloud files can be 5-30 Gb in size and will be handled by the software of the laser scan equipment which is quite powerful. The drone should produce larger MP4 videos in higher definition to permit the analysis of inaccessible information.

Other equally important data on the construction of the monuments and our interpretation of the succession of their phases will be collected with traditional means like hand drawn surveys. These sets will be digitalised for storage.

The university provides a minimum of 500 Gb storage space in the DataShare portal which should be

sufficient for our project. <https://datashare.ed.ac.uk/>

## **Documentation & Metadata**

### **6) Documentation & Metadata**

All survey data will be accompanied by sketches and explanatory notes (ideally notebooks and diaries, like archaeologists), to allow us firstly to analyse the information on our desks but also any further researchers to make their own interpretations. These will be scanned or typed into pdf format and will be stored in the same folders as the primary data. These notes will document the stations and parameters of the laser scan survey, as also the location of the photos of important construction details recorded.

Similarly, notes can be stored during the desktop analysis of the data, especially for interpretations that may challenge dating from the literature or required elaboration of several hypotheses.

The suggestion from the guidelines to label consistently the documentation and deposited metadata is very helpful, so we will set up a folder organisation and file labelling scheme: these can be nested folders with clear names organised in an order like monument > area > aspect > detail and the pdf readme or notebook file will be in any folder with key information clearly labelled as such.

It is important also to distinguish all through the data organisation what is original and raw data, and what has been processed by our team, especially for the laser scan data which often require 2-3 levels of processing and filtering.

We will set up a weekly back-up schedule for any sort of data we produce, but especially for the raw and important field data.

## **Ethics & Legal Compliance**

### **7) Ethics & Legal Compliance**

No personal or sensitive data will be collected. All data are expected to come from surveying of historic building fabric and permission has been received from the Greek Ministry of Culture and the local Ephorate, who gave us also their IPR guidelines for publication, which we will observe and acknowledge.

I would be happy for the data to be shared with the Ministry, as long as this does not infringe our ability to publish our work. The permission requests only copy of the outputs to be sent to the Ministry and the local Ephorate for their libraries. I plan to discuss the visual material of any future publication with the Ministry, though I do not anticipate any issues. We have met the director of the Ephorate and we are in good communication.

The suggestion to attend the Data Protection Courses is very helpful. <https://www.ed.ac.uk/records-management/training/dataprotection>

I have also filled the ECA RKEI Research Ethics Form

## **Storage and Back-Up**

### **8) Where will your data be stored and backed-up during the project?**

During the field surveys, immediate, live data will be exported and transferred from the recording equipment into our work computers and external hard drives as back up. As soon as it is possible thereafter, ideally on the evening of the same day and depending on internet connection, we will be storing them in the university's Research DataStore which will be the common data storage of our team. This will be done with date-labelled folders, nesting sub-folders according to the monument and type of data. This will provide 4 independent storage areas and should minimise risk of data loss.

Subsequently, at desktop analysis stage the folders will be re-organised.

The conditions laid below by the DataStore scheme are very helpful:

"DataStore provides enterprise-class storage with guaranteed backup and resilience. Data is retained on DataStore until deletion by the data owner. The backups provide resilience in the case of accidental deletion and against incidents affecting the main DataStore storage. The data are automatically replicated to an off-site disaster recovery facility, with 10 days of file history visible online. Offsite tape backups keep 60 days of history of the filesystem. The 60 day rolling snapshots allow important data to be recovered to a prior state, by request if beyond the visible period."

## **Selection and Preservation**

### **9) Where will the data be stored long-term?**

At the end of the project that data will be stored in the Research DataShare. Some key and original data like the 3D laser scan survey should be embargoed from public access until we have concluded publications of the project and discussed how the Ephorate/ Ministry can use them. These are expected to be journals, which should not take more than a year.

### **10) Which data will be retained long-term?**

At the end of the project, we will be retaining data that will be needed by ourselves for the next phase of the project or by other researchers for verification of our published findings or replication of the study. These include:

- The laser scan raw and processed data.
- Final drawings that elaborate the measured survey.
- Key photos.
- Metadata as mentioned above (notebooks, readme files, explanatory sketches)
- Any important diaries.

All these data are expected to be digital, no need to preserve hard copies.

## **Data Sharing**

## **11) Will the data produced from your project be made open?**

- Yes: go to 12

## **12) How will you maximize data discoverability & access?**

Once we are satisfied with the final data and the way they are organised, we will deposit the data in a recognised, open access repository like Edinburgh DataShare.

In addition we will get a DOI for the data and use it in all publications and communications about the project (publications and conference papers, but also social media posts, etc.);

It is important to include a Data Access Statement (or Data Availability Statement) in all publications relating to the data. This will facilitate reporting citations and aligns with the next REF aims and the UKRI Open Access policy.

We will include necessary metadata record in the UoE's publically accessible record in PURE.

We will also apply a CC BY Licence to the data to make it re-usable.

We expect most of the significant findings to be published as research outputs, but if we see a wider interest in our observations we could create a very basic web site to communicate, through the university's WordPress server possibly. The previous steps though guarantee a wider public data discoverability and access, so they may be enough.

## **Responsibilities & Resources**

### **14) Who will be responsible for the research data management of this project?**

The PI and project team will be responsible for all Research Data Management according to this Data Management Plan. Occasionally, we will need some technical guidance by the UoE Research Data Support.

### **15) Will you require any training or resources to properly manage your research data throughout this project?**

I do not anticipate a collection of complex data, so we will aim to a straightforward and meaningful structure to organise and deposit individual files in folders. Therefore, we do not expect a significant part of our time to be spent on Research Data Management. RDM training is though always useful and we will aim for this at the beginning of the project to establish a protocol. Then we can establish a standard procedure of storing and organising the material, which should be straightforward from then on.