## Data Management Plan Guidance and Evaluation

The Shelby White and Leon Levy Program for Archaeological Publications advocates professionalism in research data management so that research data can be better curated and reused by the wider community now and in the future. To help guide the preparation of your proposal's Data Management Plan, please consider the following items that we review in our evaluation of proposals:

- Does the proposal discuss the types of digital data that will be created or organized by the project? These may include one or more of the following data types:
    - Structured data (data organized in spreadsheets, databases, or GIS)
    - Digital images (photos, digitized plans and drawings, vector images)
    - Documents (field notes, correspondences, permits, agreements, etc.)
    - Other digital media (3D models, specialized data from scientific instruments etc)
- Does the proposal outline how these data will be documented and cross-referenced? What workflows or other measures will be taken to promote data quality and consistency, as well as reduce risks of data loss?
- Does the proposal identify an institution, service, or data repository that has the capacity and expertise needed to maintain project data for the long term?
- Does the proposal identify measures to promote the (re)use of project data? For instance, how may project data be cited in future publications (including the proposal's own publication goals) or used to assist conservation and curation of monuments and collections?
- While FAIR (Finable, Accessible, Interoperable and Reusable) "open data" (freely accessible and free of most intellectual property restrictions) has great value for research and education, we recognize that open data is not feasible or appropriate in some circumstances. If a project requires data restrictions, are the reasons for such restrictions clearly explained?
- What metadata, Linked Data, or other standards and "good practices" will the project use to help promote wider contextualization and/or interoperability with other relevant public research datasets curated by other teams or other institutions?

Many proposals seek to develop special websites to promote their project and share digital data. While these can be useful for short-term communication goals, project specific websites are not adequate for long term data curation. Long term data management and curation involves specialized expertise and institutionally sustained infrastructure and services. Applicants should consider dedicated archaeological data curation services offered by the Archaeology Data Service, tDAR, Open Context and others. Similarly, Zenodo.org offers a good general-purpose service for secure long-term dissemination and preservation.

## SAMPLE DATA MANAGEMENT PLANS

**EXAMPLE 1:** *Project Using a National Data Repository*

"As we work, we will make sure we regularly backup all digital data on multiple media. To improve data quality, we will use pick-lists and forms so data entry will be more consistent. We will also follow strict naming conventions on image files so their associations with object identifiers and context identifiers are clear.
Our project will archive data, including spreadsheets, database files, and image files with the Archaeology Data Service (ADS). The ADS is the leading digital repository of archaeological data and is the national archaeological data repository for the United Kingdom. With a nearly 20-year track record, its expert staff closely adheres to best practices in digital data preservation. We will follow ADS recommendations for file formats and metadata (catalog and descriptive information) about the data we will submit to the ADS.
Because the museum housing our project's collection imposes some intellectual property restrictions on digital dissemination, we will release data using a Creative Commons Attribution – Non-Commercial license."

**EXAMPLE 2:** *Project Using a Nonprofit-Managed Data Publishing Service*
"My work will digitize approximately 2,000 pages of hand-written excavation logs. I will store the digital image files in the TIFF file format which is non-proprietary and does not degrade image quality with compression. I will document these image files with an Excel spreadsheet.
The excavation diaries are housed in an archive that does not claim copyright ownership of them. Since they are 95 years old, they are suitable for release on the Internet as public domain resources. I will clearly indicate public domain status by using the Creative Commons Zero (CC-0) license. I will publish these digitized field-notes and their documentation with Open Context, an archaeological data publishing platform that archives data with the California Digital Library for long-term preservation."

**EXAMPLE 3:** *Project Developing a Website and Using a University Digital Repository*
"This publication project will develop a freely accessible website that will enable users to search through a variety of multimedia documentation. Our university IT support services will ensure that the website will remain operational for 5 years following the end of the grant period. For longer-term access, all the data and media files will be archived with our university's digital repository. The digital repository also provides persistent identifiers (DOIs) that ensure the content developed by our project can be cited securely in future scholarly works.
We will document the data created in this project using metadata ("information about information") standards developed by other leading digital data initiatives in archaeology, including the Archaeology Data Service, Digital Antiquity, and Open Context. All data and media files will be released immediately in open file formats under a Creative Commons Attribution license."