Data Management Planning

Tools and Tips

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Outline

- What is a Data Management Plan?

- What can happen with poor planning?

- Tips for good Data Management Plans

- Your Data Management Plan

- Tools and resources

Illustration credit: Ainsley Seago.

What is a Data Management Plan?

Data Management Plan

A Data Management Plan, or DMP, is an iterative document describing how you plan to manage the data gathered through the delivery of a specific archaeological project, and what will happen to that data once the project is complete.

Why should archaeologists develop a Data Management Plan?

- To avoid the **duplication** or re-working of data and **reduce** the **costs** and **time** spent on data management,

- To provide **continuity** and **consistency** across project staff and facilitate **data sharing**, leading to more **collaboration** and **advances** in archaeological research,

- To allow for the **validation** of results and data re-use, making your archaeological research more **visible** and have greater **impact**,

- To better facilitate the **long-term preservation** of your data,

- To help make archaeological data **FAIR** (Findable, Accessible, Interoperable, Re-usable).

What can happen with poor planning?

Newham Museum Archaeological Service

Active in archaeological fieldwork across North East London for several decades closed abruptly in 1998 with only a few days notice.

Staff left, computers were sold, a desperate salvage operation began.

The result? Two shoe boxes of floppy disks.

Newham Museum Archaeological Service: data

Archive approximately:

- 150 excavations

- 6432 individual files

- 1500 excavation reports

- 700 database files

- 1200 geophysics files

- 200 separate projects

The Problem?

- No link between database/files and excavations

- Missing key to codes

- Little metadata

- Some files simply couldn't even be opened (i.e., CAD)

Silbury Hill

This project only had a digital manager come in towards the end of the project.

By the end of the project the digital data was in no state to be archived.

Silbury Hill from the eastern bank of the Winterbourne © English Heritage

Silbury Hill: original data

Silbury Hill: updated

📁 Pr661_ArchiveInformation
📁 Pr661_Metadata
📁 Pr661_SiteData
📁 Pr661_PostExcavationData

📁 Pr661_ADS_Metadata
📁 Pr661_Metadata_TopconProjects
📁 Pr661_EH_Metadata

📁 Pr661_SiteRecordsDatabase
📁 Pr661_SurveyData

📄 Pr661_2001f-2003a_EvaluationReportCores1-6_Archive_v01.docx
📄 Pr661_2000a-to-2005_AssessmentReportArchaeologicalInvestigation_Draft_v01.doc
📄 Pr661_2007_AssessmentReportArchaeologicalWorkFull_Archive_v04.pdf
📄 Pr661_2005_ReportFurtherGeophysics_Archive_v02.doc
📄 Pr661_2001f_AssessmentReportCore5Pollen_Archive_v01.doc
📄 Pr661_2001f_AssessmentReportCore5MacroscopicPlantAndInvertebrate_Archive_v01.doc
📄 Pr661_2012_Summary-EHResearchReportsList_Archive_v01.doc
📄 Pr661_2003a_EvaluationReportCore7_Archive_v02.doc
📄 Pr661_2000d_SummaryReportArtefacts_Archive_v02.doc
📄 Pr661_2000b_ReportShaftFieldEvaluation_Archive_v01.doc
📄 Pr661_2000a-2000b-2000c-2000d_SummaryReportShaftCollatedArchive_Archive_v01.doc
📄 Pr661_2007_UpdatedProjectDesign_Archive_v04.pdf
📄 Pr661_2003b_ReportBadgerSettSurvey_Archive_v01.doc

📊 Pr661_2008_SurveyData-Tunnel3AM_Archive_v01.csv
📊 Pr661_2008_SurveyData-Tunnel2AM_Archive_v01.csv
📊 Pr661_2008_SurveyData-Tunnel1AM_Archive_v01.csv
📊 Pr661_2008_SurveyData-CraterSurveyAM_Archive_v01.csv
📊 Pr661_2007_SurveyData-2905b_Archive_v01.csv
📊 Pr661_2007_SurveyData-1505_Archive_v01.csv
📊 Pr661_2007_SurveyData-0708_Archive_v01.csv
📊 Pr661_2007_SurveyData-1906b_Archive_v01.csv
📊 Pr661_2007_SurveyData-0609b_Archive_v01.csv
📊 Pr661_2007_SurveyData-3110b_Archive_v01.csv
📊 Pr661_2007_SurveyData-0208b_Archive_v01.csv
📊 Pr661_2008_SurveyData-0104_Archive_v01.csv
📊 Pr661_2001f_CoreSampleSurvey_Archive_v01.csv
📊 Pr661_2007_SurveyData-0106_Archive_v01.csv
📊 Pr661_2003b_SurveyData-BadgerSett_Archive_v01.csv
📄 Pr661_2008_SurveyData-CraterSurveyAMNote_Archive-v01.doc

Tips for good Data Management Plans

1 Context

For an archaeological project, the contextual information for a Data Management Plan should include:

- Key details such as **project** or **site names** and related **unique identifiers;**
- **Funding bodies** where relevant;
- The date the DMP was **created** and last **updated**;
- The **version** number for the DMP document;
- Reference to any related **data management policies, fieldwork manuals** or other relevant documentation

2 Roles and Responsibilities

For an archaeological project, this area of your Data Management Plan should include:

- Information on who is **responsible** for **implementing** the DMP and ensuring it is **reviewed** and **revised**
- Information on who will be responsible for **each** data management activity
- How responsibilities will be **split across partners** in collaborative projects
- How data ownership and responsibility for data management be part of any **consortium agreement or contract** between partners

Context

Roles

Description

Standards

Ethics

Security

Preserve

3 Data Description

For an archaeological project, the data description section of your DMP should include:

- **What** data you will **collect** or **create** including the data **type**, **format** and **volume/size** of your data
- A justification of your chosen **formats** and the **software** used
- Information on what **existing data** is being collated and how this data will be used.

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4 Standards and Methods

For an archaeological project, this should detail the standards and methods used in the project, such as:

- **How** you will **collect** and **create** your data
- What **instrumentation** will be used and why
- What **discipline specific** data **Standards** or **methodologies** will be used and why
- How you will **structure** your data
- How you will manage **version control** of your data
- What **quality assurance** processes will be used and why
- What **documentation** and **metadata** will accompany the data and **how** will this be **captured** and **created**
- What **metadata standards** will be used and **why**

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5 Ethics and IPR

For an archaeological project, this section of your DMP should include:

- The name(s) of the **copyright holder(s)** for your data
- Information on required **data sharing agreements** (or equivalent)
- Details of any **ethical concerns** and **ethical review** processes undertaken for your data/project
- How **personal or sensitive data** will be handled, stored and transferred securely
- How you will ensure your data is compliant with a**ppropriate legislation** (i.e. GDPR 2018, UK Human Remains Acts)
- Information on any **data sharing restrictions required**, and what action you will take to overcome or minimise restrictions

6 Sharing Access and Security

For an archaeological project, this should include how your data will be stored, accessed and backed up during your research, such as:

- Details of **appropriate storage provision** for your dataset
- Information on **security** and **backup** procedures
- How data will be **recovered** in the event of an incident
- If creating or collecting data in the field, how will you ensure its **safe transfer** into your main secured systems
- How you will **control access** to keep the **data secure**
- How will you ensure **collaborators** can **access** your data securely

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7 Preservation and Access

This part of your DMP should include how your archaeological data will be preserved and made available in the long-term, such as:

- What **selection strategy** will be applied to your data and what will happen to **de-selected data**
- How will the preserved data **relate** to any planned publication and other **dissemination** materials
- **Where** will the **data be deposited**, for **how long** will it be preserved, and **why** your selected repository was chosen
- **When** you will make the data available, and under what **re-use licence**
- What are the **foreseeable research uses** for your data

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Your Data Management Plan

Data Management Plans should be:

- Project specific,
- Iterative, living documents,
- Be created collaboratively and in consultation with all team members,
- A tool to help you and your colleagues manage your data and your project.

An **AHRC** archaeological Data Management Plan should include the following:

1. Types of **data** expected to be used and why

2. Proposed **methodologies** that will be used to **create** the data

3. Data storage in the **short** term

4. **Long** term data storage

5. Data sharing and **re-use**

6. **Ethical** and **Legal** considerations

Useful Tools and Resources

External Information

AHRC Guidance
https://www.ukri.org/wp-content/uploads/2021/07/AHRC-230821-ResearchFunding GuideV5.5-2021.pdf

CIfA Dig Digital DMP Toolkit for Archaeologists
https://www.archaeologists.net/digdigital

Digital Curation Center DMP Check List
https://www.dcc.ac.uk/sites/default/files/documents/data-forum/documents/docs/ DCC_Checklist_DMP_v3.pdf   &   https://dmponline.dcc.ac.uk/

ERC DMP Guidelines
https://erc.europa.eu/sites/default/files/document/file/ERC_info_document-Open_ Research_Data_and_Data_Management_Plans.pdf

Guides to Good Practice
https://guides.archaeologydataservice.ac.uk/g2gpwiki/

THANK YOU

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CORE
TRUST
SEAL ✓