

Work Digital / Think Archive - Data Management Plan Overview

The sections below are the basic components of the Data Management Plan. Each section comprises a series of sections which need to be completed. In the pages below the DMP format is fully explained, and includes the Questions to Consider, Guidance and Examples where appropriate. The final Section, Data Use and Re-use Statement, was added to the resource in 2024.

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This document forms part of the Work Digital / Think Archive guidance for digital archives prepared by DigVentures, on behalf of Archaeological Archives Forum and in partnership with the Chartered Institute for Archaeologists. It was updated in 2024. The project was funded by Historic England (Project No. 7796 and 9113). More information, tools and resources are available as part of the ClfA Dig Digital Toolkit: www.archaeologists.net/digdigital

Section 1: Project Administration

Project ID / OASIS ID
<p>Questions to consider:</p> <ul style="list-style-type: none"> • A unique project identifier (the organisational project code, site code) • An OASIS ID should be set up for all field investigation projects • Any other unique identifier • If more than one identifier is relevant, they should be highlighted here.
Project Name
<p>Questions to consider:</p> <ul style="list-style-type: none"> • The project name and a working title where used on any products, promotion, social media or reports
Project Description
<p>Questions to consider:</p> <ul style="list-style-type: none"> • What is the nature of the project? • What are the key investigation techniques? • What is the purpose of the investigation? • When did the investigation take place / when was the data created? This might include dates for key stages of work.
Project Funder / Grant reference
<p>Questions to consider:</p> <ul style="list-style-type: none"> • How has the project been funded? • Who is the funder or client? • Are there any relevant grant reference codes?
Project Manager
<p>Questions to consider:</p> <ul style="list-style-type: none"> • Name, job title and organisation of the project manager responsible for the project
Principal Investigator / Researcher
<p>Questions to consider:</p> <ul style="list-style-type: none"> • Name, job title and organisation of the principal investigator or researcher if different to the above
Data Contact Person
<p>Questions to consider:</p> <ul style="list-style-type: none"> • Name, job title and organisation of the person who should be contacted regarding the data associated with this project
Date DMP created
<p>Questions to consider:</p> <ul style="list-style-type: none"> • The date the document originated; this should not be changed on later versions
Date DMP last updated
<p>Questions to consider:</p> <ul style="list-style-type: none"> • The date of last revision, noting any key changes which may be relevant to the data management or archive
Version
<p>Questions to consider:</p> <ul style="list-style-type: none"> • Version number for this document
Related data management policies
<p>Questions to consider:</p> <ul style="list-style-type: none"> • Is this DMP guided by any particular requirements, guidelines or data management policies? <p>Guidance:</p> <ul style="list-style-type: none"> • For example, this might include requirements stipulated in the Project Brief, ClfA Standards and guidance, the receiving museum's Archive Deposition Policy, the Trusted Digital Repository guidelines (such as ADS guidelines) or other best practice guidance • If there is an internal Data Management Policy or Operational Process Document which has guided the DMP, it can be referred to here.

What data will you collect or create?

Questions to consider:

- What type, format and volume of data will the project generate?
- Do the chosen formats and software used enable sharing and long-term access to data?
- Will existing data be used, and how will this be dealt with in the archive?

Guidance:

- Innovations in technology mean that data formats are changeable, but there are some key principles to work by when organising your digital data archive:
 - Using data formats which are standardised, openly documented and, where possible, non-proprietary is preferable. This ensures data is sharable, supports data curation and facilitates interoperability between projects and datasets – as well as avoiding technological obsolescence.
 - If conversion of file formats are required prior to deposition, details should be included in Section 6 below.
 - ADS Guides for Good Practice include guidance on data collection and formats for most relevant material: <http://guides.archaeologydataservice.ac.uk/g2gp/Contents>
 - ADS have a preferred and accepted file formats look-up table for depositors, which acts as a useful guide to formats which support long-term access <https://archaeologydataservice.ac.uk/advice/FileFormatTable.xhtml>
 - If you need some detailed technical information relating to file formats, you can look up file types, software and migration paths using the National Archives technical registry PRONOM: <http://www.nationalarchives.gov.uk/PRONOM/Default.aspx>
- Projects often use existing data within research, and a brief description of that data and any third party sources should be noted.

Example response:

Geophysical survey has previously been undertaken at the site and will be used to inform the excavation strategy. The data images including interpretation are likely to be included within the project report with permission, but the original data copyright resides with the original researchers (Geophysics Limited) and will not be deposited with this project archive.

The table below provides a summary of the data types, formats and estimated archive volume for data collected / created as part of this project. As the project progresses, more detail regarding files will be added to this DMP.

Type	Format	Estimated volume (Data Archive)
Spreadsheets	Excel (.xlsx) To be deposited in preservation format (.csv)	15 objects (size <2MB total) (Context Register / Finds & Samples Register / Photo Register / Drawing Register / Specialist data tables x 6 / metadata tables)
Text / documents	Word (.docx) PDF (.pdf/a)	15 objects (size <100MB) (Project Brief / Project Design / Updated Project Design / Final Report / Individual Specialist Reports x 6)
Vector graphics	Affinity Designer (.svg)	Site plans x 10, av size 5MB Report images x 5, av size 2MB
Images	Lossy graphics file (.jpg) Intended deposition format - uncompressed (.tiff)	Archive shots x 100, av size 4MB Photogrammetry files x 250, av size 4MB
GIS	ESRI Shapefile (.shp & .shx & .dbf, plus associated files)	Overall GIS files x 10, including 6 shp layers <10MB

How will the data be collected or created?

Questions to consider:

- What data standards or methodologies will you use?
- How will you structure and name your folders and files?
- How do you manage version control?
- What Quality Assurance processes will you adopt?

Guidance:

- Provide an outline of how the data will be collected, and which data standards might be used – where appropriate data standards exist. Any requirements set out in the Project Brief may determine the nature of data collection, and this can be highlighted here. Your own organisational data processes and workflow might also be relevant, which might be referred to in the Project Design or WSI method statements.
- To ensure that all project data conforms to the data standards cited in your DMP, you may need to discuss data collection methods with individual project specialists or contractors working outside of your organisational procedures.
- Relevant guidance for best practice relevant to data collection is included in the AAF Work Digital / Think Archive document.
- Having a well organised file structure for your Working Project Archive will make it easier to find and keep track of data files. Conventions for data file structures can be introduced at an organisational level to ensure the project team of any project will know either to find relevant files.
- Using a consistent, logical and predictable naming convention within an organisation will also help to distinguish similar records from one another instantly, facilitating the storage and retrieval of records. A clear guide to naming conventions can be found here: <https://www.ed.ac.uk/records-management/guidance/records/practical-guidance/naming-conventions> and ADS have guidance here: <https://archaeologydataservice.ac.uk/advice/PreparingDatasets.xhtml#File%20Management>
- Creating a clear hierarchy for version control is part of the file naming conventions, and it is useful to consider the two areas at the same time. Version control provides a clear indication of which file is the most recent. All versions of a document can be retained as part of a Working Project Archive, but only the final version will generally need to be retained as part of the Archaeological Project Archive.
- Having a quality assurance process for data collection and data management provides assurance that data standards across the organisation (including conventions) are being used and applied as expected.
- For data collection, this might include calibration of instruments used, taking multiple measurements and using standardised methods. For data management, this might include data validation, using project databases to manage the data structures and conforming to data conventions. Data should then be continually checked, edited and cleaned as part of project delivery.

Example response:

Data Standards / Methods

- Standard methods of data collection will be applied throughout the project, working to best practice guidance where applicable / available. In general, data acquisition standards are defined against *ADS Guides to Good Practice*. Specific or additional guidance relevant to this project are listed below, and will be updated as the project progresses.
- Methods of collection are specified within the Project Design (see PATAP19ProjectDesignV2-0.pdf) and will meet the requirement set out in the Project Brief, the organisation recording manual and relevant ClfA Standards and guidance.
- Where appropriate, project contributors external to the organisation will be required to include data standards, collection methodology and metadata with individual reports and data.
- Specific guidance:
 - HE *Digital Image Capture and File Storage: Guidelines for Best Practice* 2015
 - HES *Applied Digital Documentation in the Historic Environment* 2018
 - EAC *Guidelines for the use of geophysics in archaeology* 2016

Data storage / file naming

- The working project archive will be stored in a project specific folder or data specific folder on the internal organisational server. The internal organisation server is backed up twice daily to maintain an up to date security copy of the organisation wide data.
- Project folders are named following established organisational procedures.
- Data collected will be downloaded and raw data will be stored in the appropriate folder.
- File naming conventions following established organisational procedures, based on ADS file naming guidance, and include version control management.
- All files included as part of this project archive will include an organisational identifier (PA), the Site ID (TAP19), the file descriptor (eg ProjectDesign) and Version number (eg V2-0).
- Final versions of files will include 'FINAL' within the filename.

Quality Assurance

- Instruments used in the collection of data are calibrated prior to use and checked to ensure they are in full working order.
- All site records and data collected will be reviewed during project delivery to ensure data is accurate and secure.
- Data collection and management are reviewed regularly as part of the organisational Quality Policy (PA2017QualityPolicyV3-0.pdf). This includes a quarterly review of internal project folders to ensure our organisational data management standards are being met.

Section 3: Documentation and metadata

What documentation and metadata will accompany the data?

Questions to consider:

- What information is needed for the data to be read and interpreted in the future?
- How will you capture and create this documentation and metadata?
- What metadata standards will you use and why?

Guidance:

- As a minimum, describe the types of documentation that you will provide alongside the data to help secondary users to understand and reuse it. This should include basic details including who created or contributed to the data, date of creation and under what conditions it can be accessed.
- Documentation should also include details on the methodology used, analytical and procedural information, definitions of variables, vocabularies, units of measurement, any assumptions made, and the format and file type of the data.
- Consider how you will capture this information and where it will be recorded. Wherever possible you should identify and use existing community standards.
- The archive repository identified as part of the long-term preservation of the archive (Section 6, below) is likely to define or refer to standards for the submission of data, including accompanying documentation and metadata. These can be highlighted here and will most likely require the submission of spreadsheet tables including metadata.
- A Collection Level Metadata Summary provides a useful tool to document the project details and summarise the data included in the archive. This might be required as part of the digital archive deposition process (see link below for ADS), and could also be relevant to documentation processes for the complete Archaeological Project Archive (eg including finds, documents and digital components).
 - <https://archaeologydataservice.ac.uk/advice/DatasetlevelMetadata.xhtml#Collection-level%20Metadata%20Requirements>
- The collection of metadata can be a simple process, especially where processes are embedded into the project delivery team workflow. Metadata compilation follows the same general principle as other aspects of the archaeological archive – we are used to compiling registers for finds, photos, plans etc, and metadata tables simply provide a register of data.

- Guidelines for what to include in data specific metadata tables can be found in the ADS Guides to Good Practice as part of the guide for each data section, and a summary of how to prepare data for deposition can be found within the ADS Guidelines for Depositors.
 - <http://guides.archaeologydataservice.ac.uk/g2gpwiki/>
 - <https://archaeologydataservice.ac.uk/advice/PreparingDatasets.xhtml#Metadata>

Example response:

- Data collected will include standard formats which maximise opportunities for use and reuse in the future (see Section 2, above).
- A Collection Level Metadata Summary is included in all standard archaeological projects and will be completed as the project is delivered. A working copy will be kept on the organisational server in the Project Folder. The Collection Level Metadata Summary brings together the overarching project details and includes a register of data types and number of objects included in the archive, along with all other archive components.
- Metadata tables for each data type will be populated as the project progresses and will use the standard format for each data type as recommended by ADS, who are the intended repository for the digital data archive.
- Data documentation will meet the requirement of the Project Brief, Museum Deposition Guidelines, Digital Repository Guidelines and the methodology described in the Project Design methodology.
- An archive catalogue documenting both physical and digital archive products will be maintained and submitted with both the Museum and Trusted Digital Repository.

Section 4: Ethics and legal compliance

How will you manage any ethical, copyright and Intellectual Property Rights (IPR) issues?

Questions to consider:

- Does your project archive include data which requires formal consent to be used or included, and have you gained the required consent?
- How will you protect the identity of individuals if required? For example, ensuring that there is a legal basis for inclusion of individual's names in the archive including transfer to the repository
- Is your digital data archive compliant with GDPR 2018 legislation?
- How will sensitive data be handled, stored and transferred securely?
- Who owns the data?

Guidance:

- Managing ethical concerns of digital data might include anonymisation of data (such as personal addresses), gaining permission for the inclusion of images, and making plans to ensure that formal consents are in place when the data is collected or at the appropriate stage in the project.
- GDPR legislation 2018 protects the collection and use of sharing of personal data. Most organisations should have a Privacy Policy in place which articulates how that organisation manages personal data. It is recommended that any project data is checked against this policy prior to archive depositions, ensuring that personal data is not included within the archive.
- Consideration of how sensitive data will be handled is also a key part of the project planning. The DMP should identify if sensitive data is likely to be included in the working project archive, provide a summary of how that data might be managed and how it will be dealt with in the archive with regard to data sharing.
- One of the key principles of archaeological projects is to make the results of the investigation widely available, accessible and re-usable. Ensuring that ownership, data sharing (including reporting and publication) and preservation (long-term) has been discussed as the project progresses with clients and stakeholders, and that copyright agreements are in place where necessary, will help reduce any issues.
- With regards to copyright, although the creator of the work or the employer will generally hold the copyright for data, contracts and funding agreements may require that another party also holds copyright to works they have supported.

- Consider use of a data sharing agreement – this is an example from the Society for Museum Archaeologists: <http://socmusarch.org.uk/data-sharing-agreement-archives-template-sma/>
- Some museum deposition guidelines may require rights to be waived / licenced for use in perpetuity
- Any ethical issues relating to specific data should be documented in the metadata tables which accompany the project archive.

Example response:

- The project archive will include the names and contact details of individuals who intend to volunteer or participate in the excavation and post excavation stages. We have a GDPR compliant Privacy Policy which underpins the management of personal data; any personal data is managed through a secure cloud-based database and not retained on the project specific folders.
- Personal data will be removed from the archaeological project archive and permission to include individual's names in any reporting is gained prior to use.
- Copyright for all data collected by the project team belongs to the organisation, and formal permission to include data from external specialists and contractors is secured on the engagement of the specialist or contractor.
- Where formal permissions and/or license agreements are linked to data sharing, they will be included in the project documentation folders and will accompany the archaeological project archive.

Section 5: Data Security: Storage and Backup

How will the data be stored, accessed and backed up during the research?

Questions to consider:

- Do you have sufficient storage?
- Do you need to resource further storage?
- How do you maintain a security copy of your data, and who will be responsible for backup and recovery?
- How will the data 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 will you control access to keep the data secure?
- How will you ensure that collaborators can access your data securely?

Guidance:

- This section refers to the Working Project Archive and not to long-term preservation, see Section 6.
- The number and size of data accumulated throughout a project should be considered at the project planning stage to ensure there are adequate resources to manage a secure working project archive.
- Digital data is vulnerable and needs active management to ensure that risk of data loss is kept to a minimum. Within the DMP, you will need to provide an indication of how you will keep data secure through the working life of the project and provide sufficient measures to prevent data corruption or loss.
- Storing working project archive data on laptops, computer hard drives or external storage devices alone is very risky and does not meet ClfA Standards for archives which state that:
 - 3.1.1 *Ensuring the security and stability of the archive is a continuous process and a universal responsibility*
 - 3.4.7 *Security copies of all digital material should be created and managed as appropriate.*
- The DMP must provide an outline of the system of back up and security copy which your project team will have in place to protect the working project archive. This might include defining how often the data will be backed up and to which locations, how security copies are being made and what media is being used to host data. Ideally, the DMP will also include details of which team members are responsible for any actions and a process identified for data recovery.
- During fieldwork, data is often collected in the field and you should ensure that data security measures are also taken which protect data as it is acquired. This might include providing off site access to organisations servers, or ensuring a back-up copy of raw data is maintained during fieldwork.

- For guidance on data storage at an organisational level, the Digital Preservation Coalition has a detailed section in their *Digital Preservation Handbook*:
 - <https://www.dpconline.org/handbook/organisational-activities/storage>
- This also includes a separate section on cloud computing, which can provide a useful solution for the working project archive
 - <https://www.dpconline.org/handbook/technical-solutions-and-tools/cloud-services>
- The UK Data Archive handbook on managing and sharing data (2011) provides a useful section on data storage and keeping data safe (from p17)
 - <https://data-archive.ac.uk/media/2894/managingsharing.pdf>

Example response:

- Organisational IT is managed by an external data management provider, who is also responsible for the management and verification of our daily back-ups and who supports access to security copies as needed.
- Sufficient data storage space is available via the organisational server, which includes two-factor authentication and permissions-based access. The server is accessible by staff on and offsite through a secure log-in.
- Off-site access to the project files on the organisation's server is provided to support back-up of raw data while fieldwork is ongoing. Where internet access for data back up is not possible, the raw data will be backed up to a separate media device (such as laptop and portable external hard drive).
- Project files will be shared with external specialists and contractors directly using the same system, with the wider project team gaining access to only the files needed using permissions-based access.

Section 6: Selection and Preservation

Which data should be retained, shared, and/or preserved?

Questions to consider:

- How will you decide which data should be selected for inclusion in the Archaeological Archive?
- What will be the key selection review points during the project?
- How will the data relate to any planned publication and dissemination materials?
- What are the foreseeable research uses for the data?
- Describe what will happen with the de-selected data?

Guidance:

- A complete set of the digital data included in the Working Project Archive does not need to be retained in full as part of the deposited Archaeological Archive. As with the other records and materials which make up the Working Project Archive, a selection process should be undertaken which is agreed in advance of deposition by all stakeholders (project team, advisory team and intended repository).
- ClfA's *Selection Toolkit for Archaeological Archives* 2018 provides comprehensive advice regarding the development of a project-specific Selection Strategy. The DMP will support the Selection Strategy, and both documents will be included with the pre-project documentation (eg the Project Design and/or WSI).
- An updated copy of the Selection Strategy and DMP should be included in the project report as an appendix and should accompany the Archaeological Archive to the Collecting Institution.
- Review points along the project delivery which will inform the Selection Strategy should be noted. These will ideally be linked to key stages that provide an opportunity for review, specialist input and evaluation, such as Project Design, Post Excavation Assessment, Updated Project Design, Project Reporting. The Selection Strategy and DMP can be updated as the project progresses.
- Reasons for selection will vary from project to project and should take into consideration the project aims and significance of the results, the research potential and contribution to regional research frameworks, and ability to provide greater access to heritage.
- Negative archaeological results, such as from a Watching Brief, are unlikely to produce a large digital data archive for deposition. In this circumstance, a technical archaeological report attached to the OASIS record with a limited selection of images would suffice, as long as this was agreed as part of the Selection Strategy and DMP process.

- Where data is selected for inclusion in the project Archaeological Archive, it should be deposited in the data format identified in Section 2. Inclusion of images, context records, finds registers, specialist data and reports within a PDF document does not constitute digital data archiving.
- The planned dispersal (eg deletion or organisation-level archive) of de-selected material should be summarised.

Example response:

- The Selection Strategy and DMP will be reviewed and updated as part of the Post Excavation Assessment and Updated Project Design, and following full analysis. Updated documentation will be included in all reporting stages.
- Prior to deposition, the Selection Strategy and DMP will be updated and finalised in agreement with all project stakeholders (including the Local Planning Archaeologist, Client, Museum, ADS).
- Selection will be informed by the Project Design, defined against the research aims, regional and national research frameworks, specialist advice and the significance of the project results.
- The project will be published as an online technical report (accessible via OASIS and as part of this the archive), with full access to research data, and a short hard copy leaflet / booklet produced which raises awareness to the findings of the archaeological excavation and link to the digital archive.
- The project results are likely to provide new research data which can be included in the Historic Environment Record and will contribute to the knowledge of the early medieval period at The Site, and aiding the future management of the archaeological site.
- The data archive will be ordered, with files named and structured in a logical manner, and accompanied by relevant documentation and metadata, as outlined in Sections 2 and 3 of this DMP.

What is the long-term preservation plan for the dataset?

Questions to consider:

- Where will the digital data elements of the preserved Archaeological Archive be deposited and preserved in perpetuity?
- What costs if any will your selected data repository or archive charge?
- Have you costed in time and effort to prepare the data for sharing / preservation?

Guidance:

- The digital archive should be deposited with a repository recognised with the Core Trust Seal certification. This certification is based on a universal catalogue of requirements which defines trustworthy data repositories and underpins the secure and long-term preservation of data in perpetuity.
- Core Trust Seal certification meets the requirements of ClfA Standards for archives that:
 - 3.1.1 *All archaeological archives must be stored in repositories that maintain proper standards of care and accessibility*
 - 3.5.5 *Digital archive material should be deposited with a trusted digital repository, where data migration and backup procedures are in place, and the integrity of the digital archive is maintained.*
- The intended repository for the digital archive should be identified in the Data Management Plan, as required by the ClfA Standards for archives
 - 3.3.2 *Project specifications, research designs or similar documents should identify the repository where the archive will be deposited for long-term curation.*
- Due to the specialist nature of digital archives management, the digital archive and the physical archive may not always be deposited together. Whilst museums may request a copy of some or all of the project data for their own purposes, the digital archive must be deposited with a Core Trust Seal certified repository.
- The DMP should indicate that adequate consideration of the costs of deposition, including resources for the preparation of the archive, have been included in the project budget.

Example response:

- The digital archive will be deposited with the Archaeology Data Service, which is a certified repository with Core Trust Seal.

- The archive will be prepared for deposition by the project team and the costs for the time needed for preparation, and the cost of deposition have been included in the project budget.

Have you contacted the data repository?

Questions to consider:

- Have you contacted the trusted digital repository?
- If you have not, explain why this has not happened.

Guidance:

- You will need to communicate with the digital data repository and the intended museum for physical archive deposition at the start of the project to discuss your project archive.
- Both repositories will provide all the information you need to prepare and document the full archive (both physical and digital). This will facilitate proper consideration of the any deposition requirements well in advance.
- It would also be appropriate to discuss any changes to the original strategy with the repository, following different stages of assessment and analysis – which can be done via the DMP.

Example response:

- The relevant Museum has been contacted during project initiation and confirmed that the digital archive component should be deposited with a trusted digital repository.
- ADS have also been contacted as the intended repository for digital data.

Have the costs of archiving been fully considered?

Questions to consider:

- Are costs for the digital archive included in the project budget?

Guidance:

Making sure that sufficient allowance for digital archiving, including data preparation as well as deposition, will help minimise surprise costs at the end of the project. Cost projections can be estimated using tools like the ADS Costing Calculator, and should also consider inflationary increases for bigger projects.

Example response:

- A costing estimate has been produced using the ADS Costing Calculator and sufficient resources to cover these costs, and to allow for the preparation of the archive, have been included in the project budget.

Section 7: Data Sharing

How will you share the data and make it accessible?

Questions to consider:

- Has the project been added to the OASIS Index of Archaeological Investigations?
- How will you report the results of the project?
- Where will those results be shared and how will people find them?
- When will you make the data available?
- How will project data be shared with the Historic Environment Record?

Guidance:

- Providing a summary of the archaeological work undertaken is a requirement of ClfA Standards and guidance for archaeological excavation
 - *3.3.9 and 3.4.7 Where it is possible to submit a record to an appropriate Standard and guidance: for archaeological excavation online index (OASIS or equivalent), a record should be completed and supplied within an agreed timeframe to ensure that other practitioners are aware of work in progress.*

- It is recommended that all projects undertaken in the UK are added to the OASIS Index of Archaeological Investigations at the earliest stage of the project, so this section should simply indicate if the record has been initiated, and if that is not the case, explain why
 - <https://oasis.ac.uk/pages/wiki/Main>
- Provide a summary of how the site will be reported on – a technical grey literature report, a journal paper, full publication – and how those documents will be found.
- Estimate when the project data is expected to be available – which might refer to project timetables as agreed in the Project Design or WSI, and will be subject to change.
- Outline of any specific arrangements with the HER with regards to data sharing in the DMP.
- The submission of the final report to the HER is a necessary step in all archaeological projects, as it ensures the information is accessible at a local and regional level. As the final report will include an updated copy of the DMP which will signpost the intended location of relevant data, in most cases this action will also provide the HER with the details they need.
- Information on access licence details, eg creative commons licences, highlighting the nature of any restrictions.

Example response:

- A summary of the project has been included on the OASIS Index of Archaeological Investigation and the museum and digital archive repository, and will be updated as the project progresses.
- The investigations are likely to result in a number of documents: Project Design, Post Excavation Assessment and Updated Project Design, Final Report, Journal submission.
- The final report is expected to be completed within 12 months of the completion of fieldwork.
- As the project progresses reports will be attached to the project OASIS record.
- A final version of the project report will be supplied to the Historic Environment Record via OASIS, and any data which they request can also be provided directly.
- The location (s) of the final Archaeological Archive will be added to OASIS when appropriate.
- The ADS will disseminate the digital elements of the Archaeological Archive online under a creative commons licence and the dataset will receive a unique identifier (DOI).

Are any restrictions on data sharing required?

Questions to consider:

- What action will you take to overcome or minimise restrictions?
- For how long do you need exclusive use of the data and why?
- Will a data sharing agreement (or equivalent) be required?

Guidance:

- Specific projects may be subject to a temporary embargo on data sharing and some agencies may have restrictions on what data can be shared. It is important to have discussed these issues at the beginning of a project and that any formal permissions required are gained in advance of archive deposition.
- Embargos on data sharing should not prevent the deposition of the digital data archive, but the accompanying documentation will need to clearly state the requirement.

Example response:

- A temporary embargo may be required on the sharing of the project results. If this is the case, specific details once agreed will be included in the updated version of this DMP and will be documented in the overarching Project Collection Metadata.
- Data specific requirements, ethical issues or embargos which are linked to particular data formats will be documented within the relevant metadata tables accompanying the project archive.

Who will be responsible for implementing the data management plan?
<p>Questions to consider:</p> <ul style="list-style-type: none">• Who is responsible for implementing the DMP, and ensuring it is reviewed and revised?• Who will be responsible for each data management activity?• How will responsibilities be split across partners in collaborative projects?• Will data ownership and responsibility for data management be part of any consortium agreement or contract agreed between partners? <p>Guidance:</p> <ul style="list-style-type: none">• Outline the roles and responsibilities for all activities e.g. data capture, metadata production, data quality, storage and backup, data archiving & data sharing.• Consider who will be responsible for ensuring relevant policies will be respected.• Individuals can be named where appropriate.• Where projects are delivered by a consortium of different organisations, explain how the responsibility for data management will be agreed. <p>Example response:</p> <ul style="list-style-type: none">• The Project Manager will be responsible for implementing the DMP, and ensuring it is reviewed and revised at each stage of the project.• Data capture, metadata production and data quality is the responsibility of the Project Team, assured by the Project Manager.• Storage and backup of data in the field is the responsibility of the field team.• Once data is incorporated into the organisations project server, storage and backup is managed by an external company.• Data archiving is undertaken by the project team under the guidance of the Archives Officer, who is responsible for the transfer of the Archaeological Project Archive to the agreed repository.• Details of the core project team can be found in the Project Design.

Section 9: Data Use and Re-Use Statement

Data Use
<p>Questions to consider:</p> <ul style="list-style-type: none">• Where has the data been used?• What associated collections relate to the digital data? <p>Guidance:</p> <ul style="list-style-type: none">• Include bibliographic references and DOIs (where available) of any products which are related to the collection and describe any data statements included in the technical reports, or publication of a standalone data paper.• Include details of other collection elements, such as the physical archive, and where this is located. <p>Example response:</p> <p>Associated publications:</p> <ul style="list-style-type: none">• Casswell, C., Jackson, N., Jago, I., Pina-Dacier, M., Tatton, H. and Ungemach, J. 2021. Gatehouse Project, Pontefract Castle Community Archaeology Project, Archaeological Analysis Report. Unpublished DigVentures report. Accessed February 2023: Full Analysis Report PDF• Wilkins, B., Casswell, C., Eno, M., Harris, J., Pina-Dacier, M., Tatton, H. and Ungemach, J. 2021 Social Impact Archaeology: Pontefract Castle and the Gatehouse Project, <i>Internet Archaeology</i> 57. https://doi.org/10.11141/ia.57.18

- Jago, I. and Forster, M. 2023 Archaeological Excavations and Social Impact at Pontefract Castle (data paper), Internet Archaeology 61. <https://doi.org/10.11141/ia.61.9>
- Jackson, N., Casswell, C. and Forster, M. 2023. A Medieval Drawbridge Pit and the stories it tells us, excavations at Pontefract Castle, 2019 – 2020. Internet Archaeology.
- Video documentary: <https://vimeo.com/511121796>

Associated collections:

- Pontefract Castle Gatehouse – archaeological archive (physical elements), Wakefield Museums

How has re-use of the data been considered?

Questions to consider:

- How have you supported the reuse of the digital data archive?
- How have you considered the navigation of / interface with the digital archive?
- Have you outlined the potential of the digital archive?
- Is the location of the archive clearly signposted in disseminated project documents?
- In what manner can the data be reused? (thinking specifically of what the data licence is, e.g. can the data be reused for commercial purposes).
- Which bodies/groups are likely to be interested in the data? (e.g. types of specialists, academic research etc).

Guidance:

- Outline how the reuse of the digital archive is supported eg beyond making data / metadata available
- Provide a summary of how the interface of the archive has been planned to support use of the data
- Highlight use of archive navigation tools, such as a query option, have been incorporated into the archive interface

Example response:

- The data structure has been designed from a user perspective to support accessibility of information beyond availability of metadata.
- The Collection Level Metadata Summary documents the project context and summarises the data included in the archive.
- The ADS interface provides details of the collection, and includes a data query option to support location of data types.
- The main Technical Report produced and included in the archive, includes a section describing the archive collections and how to access data and artefact. This report was also submitted to the regional HER.
- A peer-reviewed Data Paper has been published to support accessibility (include DOI). This highlighted the content and the potential of the archive.
- The ADS will disseminate the digital elements of the Archaeological Archive online under a creative commons licence will allows redistribution but not use for commercial purposes (eg CC BY-NC 4.0 DEED – non-commercial).