

NERC grant applications: data management guidance

Introduction

This document provides guidance on:

- Submitting an **Outline Data Management Plan** as part of an application for NERC grant funding;
- Planning for **data storage, processing and archiving**, and including any relevant costs in an application;
- Integrating data management into your research planning at an early stage, using the NERC **Full Data Management Plan** that all funded projects will be required to complete.

General guidance on data management planning is available on the [Research Data Management website](#). Contact the Research Data Manager if you have any questions about data management planning for your project or require guidance on completing your Outline Data Management Plan.

Contact: Research Data Manager: researchdata@reading.ac.uk / 0118 378 6161.

Outline Data Management Plan

When completing a NERC grant application you are required to submit as an attachment an **Outline Data Management Plan** (ODMP). This is a minimal document, and simply asks you to:

- identify any datasets to be produced by the project which will be of long-term value, and will be made available to NERC Environmental Data Centres for archiving and re-use at the end of the grant;
- indicate if the total volume of data is likely to exceed 1 TB; and
- nominate the NERC data centre(s) to which you expect data to be offered.

The Outline Data Management Plan and associated guidance can be found [here](#).

The ODMP must not exceed 1 page of A4 in a minimum 11-point font size.

You should clearly identify and characterise all relevant data. It may help to quantify these, e.g. by number of experiments or scale. Where volumes are substantial, you should give an estimate of the total volume of data you expect to collect/generate. This will be necessary to justify any costs you claim in your application for data storage and archiving, and is required by NERC if the total volume to be archived will exceed 1 TB.

You do not need to provide any more information than this with your application, although if you expect that data will not be suitable for archiving in a NERC data centre, you can use the ODMP to indicate this and identify alternative archive services that you propose to use. See the guidance on Archiving, below.

Storage and computing: requirements and costs

You should also consider when developing your proposal and application:

- how much data you will need to store during the project, where data will be stored, and whether there are any associated costs;
- whether any dedicated computing resource is required for computing-intensive proposals, and if so at what specification and cost;
- whether any data repositories will be used additionally or alternatively to NERC data centres for long-term archiving of project data.

Where costs are identified these will have to be itemised in the costs for your application and justified in the Justification of Resources section.

Storage

Data collected/held at the University should be stored using University-managed infrastructure, which will provide data security, replication in separate data centres, automated backup and file recovery. For the different options available, and information about costs, please [read the guidance here](#).

Storage costs should be based on the volume of data to be generated/collected in the project, and should be identified on the application as a Directly Incurred cost.

Computing

If you have computing-intensive requirements, custom specifications of CPU, memory, storage and GPU can be purchased from the University on a pro rata basis. Information is available in the [Academic Computing Team website](#).

Archiving

Some data may not be suitable for archiving in NERC data centres, either because they are outside the subject remit of the data centres' collection policies, or because they do not meet the long-term value criteria specified in NERC's [Data Value Checklist](#).

If you think some or all of your data will not be suitable for archiving to a NERC data centre and wish to use alternative data repositories, you can state this on your ODMP and indicate which services you propose to use. If you are unsure about the most appropriate service to use, you should discuss this with the NERC data centre that offers the closest fit to your subject.

There may be costs for archiving data in alternative repositories that you will need to include in your application. You can search for data services at <http://www.re3data.org/>.

All University members have the option of using the [University of Reading Research Data Archive](#), which will preserve and enable access to data in the long-term. Up to 20 GB of data per project can be deposited at no charge. Deposits greater than 20 GB may be

subject to a charge and must be agreed in advance. If you intend to deposit more than 20 GB of data in the Archive, contact researchdata@reading.ac.uk to discuss.

Note that the Archive should be used to deposit a defined, curated, publicly-accessible dataset that supports published project findings. It is not a private post-project storage area for all digital materials.

Full Data Management Plan

When an award has been made, the PI will be required to develop a **Full Data Management Plan** in conjunction with the appropriate NERC data centre. This Plan must be agreed within 3 months of the start date of the grant.

It is a good idea to look at NERC's Full Data Management Plan template when you are preparing your application and to start sketching out a full plan in collaboration with your team and/or partners. This can help you:

- plan the practicalities of data collection and management in your project, and anticipate any special requirements, issues or particular challenges that will have to be dealt with;
- ensure all relevant costs are identified and included in your application.

The Full Data Management Plan template can be found [here](#).

To assist you in completing a plan you can use a tool called [DMPonline](#). Using DMPonline you can generate and complete a NERC Full Data Management Plan template. The template includes detailed prompts and guidance to help you complete each section of the plan. Plans can be saved, shared with co-applicants, and exported for incorporation into the grant application.

Guidance on completing the sections of the Full Data Management Plan follows.

Roles and responsibilities

For example: who is responsible for obtaining 3rd party data, for capturing data in the field, producing metadata, transferring metadata and data to the nominated data centre.

Data generation activities

Short description of the what, how much, when and how etc.

In-project data management approach

Statement about how the data will be managed within the project, including backup & security.

Include in this section information about proposed procedures/workflows for data collection, documentation and management. For collaborative projects or projects with large teams in particular, you may need to think about how responsibilities and activities will be co-ordinated between partners, team-members and different institutions, and how data will be shared within the project.

Services for storage and processing of data should be identified. Storage costs should be based on the volume of data to be generated/collected in the project, and should be identified on the application as a Directly Incurred cost.

Metadata and documentation

Statement about how metadata will be supplied and standards to which it will adhere.

If you will be using specific data formats or metadata standards to describe particular data types, e.g., to comply with data repository requirements, identify these and provide relevant information. Information about metadata standards, tools and use cases can be found [here](#).

Data quality

List procedures for quality control of the data

Describe procedures that will be used in the project to undertake quality control and quality assurance.

Exceptions or additional services

Identify any exceptional expectations of Data Centres (for example exceptional size or complexity) - funding for which should be included within the project's Directly Incurred costs and explained within the Justification of Resources attachment.