

# Data Management Planning

**NERC FUNDING APPLICANTS**



NATURAL  
ENVIRONMENT  
RESEARCH COUNCIL

<b>Author</b>	Andrew Burnham
<b>Date</b>	2 September 2015 (original 15 July 2013)
<b>Version</b>	1-3
<b>URL</b>	<a href="http://www.le.ac.uk/researchdata">http://www.le.ac.uk/researchdata</a>
<b>File</b>	UoL_DMP_NERCGuide_v1-3
<b>Reviewed by</b>	Research Infrastructure Advisory Group, Research Data Management Working Group, IT Services, Information Assurance Services.
<b>IPR</b>	
<b>Classification</b>	May be viewed by anyone, anywhere in the world
<b>Acknowledgement</b>	<i>This document is an adaptation of a document produced by the data.bris team at the University of Bristol, whose permission to adapt the document is gratefully acknowledged.</i>

## Document History

Version	Date	Author	Detail/Reason for Change
<b>1-3</b>	02.09.2015	A. Burnham	Inclusion of RDM Principles, updates and corrections
<b>1-2</b>	27.03.2014	A. Burnham	Minor edit.
<b>1-1</b>	20.02.2014	A. Burnham	Minor edit.
<b>First published version (1-0)</b> \\UoL_DMP_NERCGuide_v1-0.docx (.pdf)	15.07.2013	A. Burnham	First published version.
<b>Draft 4</b> \\UoL_DMP_NERCGuide_v0-4.docx	08.07.2013	A. Burnham	Final draft with minor edits.
<b>Draft 3</b> \\UoL_DMP_NERCGuide_v0-3.docx	06.06.2013	A. Burnham	Third draft from review by RCMG. Approved for release by PVC Research.
<b>Draft 2</b> \\UoL_DMP_NERCGuide_v0-2.docx	30.05.2013	A. Burnham	Second draft for review by RCMG.
<b>Draft 1</b> \\UoL_DMP_NERCGuide_v0-1.docx	22.04.2013	A. Burnham/University of Bristol	First draft using University of Bristol document as basis.



The Natural Environment Research Council (NERC) Data Policy<sup>1</sup> includes a clear statement on the need for openness and access to the data that underpin research publications. Research data produced by activities funded by the NERC is considered to be a public good which should be made openly available for anyone to use. The same policy includes a formal requirement for all funding applicants to submit an outline data management plan (ODMP), which will be evaluated as part of the grant assessment process.

## 1. Summary of NERC data requirements

The following points summarise NERC data requirements:

- Usually a one-page Outline Data Management Plan (ODMP)<sup>2</sup> is required at the application stage.
- A fuller Data Management Plan (DMP)<sup>3</sup> must be provided to NERC within three months of the project's starting date.
- NERC provides a Data Value Checklist<sup>4</sup> to help researchers decide which datasets have long-term value.
- At the end of a research project NERC requires that all datasets with long-term value should be made available for others to use with as few restrictions as possible, and in a timely manner, usually via one of the NERC Data Centres.
- Researchers are entitled to 'right of first use' (i.e. exclusive access) to the data they generate, but this period must not be longer than two years from the end of data collection/creation.
- All research publications arising from NERC funding must include a statement on how underpinning research datasets can be accessed<sup>5</sup>.

## 2. What you need to know - introduction to data requirements

The NERC Data Policy applies to all environmental data acquired, assembled or created through activities that are either fully or partially funded by NERC. The Policy also applies to environmental data managed by NERC, but for which NERC was not the original funder. NERC defines environmental data as items or records that are usually obtained by measurement, observation or modelling of the natural world and the impact of humans upon it. This includes data generated through complex systems, such as information retrieval algorithms, data assimilation techniques and the application of numerical models.

---

<sup>1</sup> NERC Data Policy, <http://www.nerc.ac.uk/research/sites/data/policy/>

<sup>2</sup> NERC Guidance notes for completion of the Outline DMP, <http://www.nerc.ac.uk/research/sites/data/dmp/dmp-guidance/>

<sup>3</sup> NERC Data Management Plan Template, <http://www.nerc.ac.uk/research/sites/data/dmp/>

<sup>4</sup> NERC Data Value Checklist, <http://www.nerc.ac.uk/research/sites/data/policy/data-value-checklist/>

<sup>5</sup> NERC Data Policy: guidance notes, <http://www.nerc.ac.uk/research/sites/data/policy/datapolicy-guidance/>

NERC is committed to safeguarding the availability of research data which has long-term value for research, teaching and wider uses, in order to:

- Support the integrity, transparency and openness of research.
- Assist in the formal publication of datasets and enable the tracking of their usage through citation and data licences.
- Abide by relevant legislation and government guidance on the management and distribution of environmental information.
- Ensure the long-term availability of environmental data by supporting several Data Centres<sup>6</sup> and by stipulating several conditions relating to data sharing, which all recipients of NERC funding must observe.

The NERC stance on the management and sharing of research data is shared by most major research funders, including the Research Councils UK, the National Science Foundation and the European Commission.

For more general information concerning research data management issues, please refer to another document in this series, **‘An Introduction to Managing Research Data - For Researchers and Students’**.

### 3. Where to get help and information

Refer to the University research data website [www.le.ac.uk/researchdata](http://www.le.ac.uk/researchdata) where specific funder related information and the latest data management advice will be included.

The range of appropriate contacts includes:

- |                           |                                       |
|---------------------------|---------------------------------------|
| • IT Services             | • Leicester Learning Institute        |
| • Library                 | • Information Assurance Services      |
| • Research Support Office | • Enterprise and Business Development |

A single point of contact is also available: email [researchdata@le.ac.uk](mailto:researchdata@le.ac.uk) at any time and as early as possible in the bid process. This will means specific queries or general request for assistance can be directed to the right place(s). You can also request assistance with development of a data management plan via this email address.

It is also recommended that you use the Digital Curation Centre (DCC) DMPOnline<sup>7</sup> resource to create a data management plan (DMP) using the NERC template and requirements. As and when University of Leicester templates and specific guidance are created this will be confirmed on the RDM website<sup>8</sup>.

---

<sup>6</sup> NERC Data Centres, <http://www.nerc.ac.uk/research/sites/data/>

<sup>7</sup> DMPOnline, <https://dmponline.dcc.ac.uk/>

<sup>8</sup> Data Management Planning, <http://www2.le.ac.uk/services/research-data/create-data/DMPPlan>

Specific research IT services available include Research File Storage, high performance computing, Wiki, 'LAMP' stack (a general purpose, Linux, relational database and web hosting service, based around open source software- Linux, Apache, MySQL and PHP), file transfer (FileDrop) and source code control (Subversion SVN)<sup>9</sup>.

In 2014 the University agreed it's **RDM Principles**<sup>10</sup> which act to guide researchers and inform funders of the University approach (see 10. below).

## NERC and general Information

NERC Data Policy (2011)	<a href="http://www.nerc.ac.uk/research/sites/data/policy/">http://www.nerc.ac.uk/research/sites/data/policy/</a>
NERC Data Value Checklist	<a href="http://www.nerc.ac.uk/research/sites/data/policy/data-value-checklist/">http://www.nerc.ac.uk/research/sites/data/policy/data-value-checklist/</a>
NERC Data Policy: guidance notes	<a href="http://www.nerc.ac.uk/research/sites/data/policy/datapolicy-guidance/">http://www.nerc.ac.uk/research/sites/data/policy/datapolicy-guidance/</a>
NERC Guidance notes for completion of the Outline Data Management Plan	<a href="http://www.nerc.ac.uk/research/sites/data/dmp/dmp-guidance/">http://www.nerc.ac.uk/research/sites/data/dmp/dmp-guidance/</a>
NERC Data Management Plan Template	<a href="http://www.nerc.ac.uk/research/sites/data/dmp/">http://www.nerc.ac.uk/research/sites/data/dmp/</a>
NERC Discovery Metadata Standard	<a href="http://data-search.nerc.ac.uk/documents/nerc_metadatastandard.pdf">http://data-search.nerc.ac.uk/documents/nerc_metadatastandard.pdf</a>
NERC Data Catalogue Service	<a href="http://data-search.nerc.ac.uk/">http://data-search.nerc.ac.uk/</a>
NERC Data Centres	<a href="http://www.nerc.ac.uk/research/sites/data/">http://www.nerc.ac.uk/research/sites/data/</a>
Digital Curation Centre NERC Funder's Data resource	<a href="http://www.dcc.ac.uk/resources/policy-and-legal/research-funding-policies/nerc">http://www.dcc.ac.uk/resources/policy-and-legal/research-funding-policies/nerc</a>
Digital Curation Centre 'DMP Online' tool	<a href="https://dmponline.dcc.ac.uk/">https://dmponline.dcc.ac.uk/</a>
Digital Curation Centre DMP Checklist	<a href="http://www.dcc.ac.uk/resources/data-management-plans/checklist">http://www.dcc.ac.uk/resources/data-management-plans/checklist</a>
UK Data Archive – Managing and Sharing Data	<a href="http://www.data-archive.ac.uk/media/2894/managingsharing.pdf">http://www.data-archive.ac.uk/media/2894/managingsharing.pdf</a>
University Research Data Management Website	<a href="http://www.le.ac.uk/researchdata">www.le.ac.uk/researchdata</a>
University Research Data Management Support	<a href="mailto:researchdata@le.ac.uk">researchdata@le.ac.uk</a>

<sup>9</sup> IT Services, <http://www2.le.ac.uk/offices/ithelp/>

<sup>10</sup> RDM Principles, [http://www2.le.ac.uk/services/research-data/documents/uol\\_rdmprinciples](http://www2.le.ac.uk/services/research-data/documents/uol_rdmprinciples)

---

University Research Data Management Principles	<a href="http://www2.le.ac.uk/services/research-data/documents/uol_rdmprinciples">http://www2.le.ac.uk/services/research-data/documents/uol_rdmprinciples</a>
RCUK Joint Electronic Submission System (Je-S)	<a href="https://je-s.rcuk.ac.uk/JeS2WebLoginSite/Login.aspx">https://je-s.rcuk.ac.uk/JeS2WebLoginSite/Login.aspx</a>

---

## 4. Researcher responsibilities

NERC expects everyone whom it funds to manage the research data they produce in an effective manner, during the lifetime of their project.

At the end of a research project NERC requires that all datasets with long-term value should be made available for others to use with as few restrictions as possible, and in a timely manner.

Researchers are entitled to 'right of first use' (i.e. exclusive access) to the data they generate, but this period must not be longer than two years from the end of data collection/creation.

All research publications arising from NERC funding must include a statement on how underpinning research datasets can be accessed. Such supporting research data will usually be made available through one of the NERC Data Centres.

Applicants initially describe how they intend to fulfil these criteria by providing a brief Outline Data Management Plan (ODMP) at the application stage as an additional page appended to the Case for Support. A fuller Data Management Plan (DMP) then expands upon this outline and must be provided to NERC within three months of the project's starting date.

These stipulations apply to all applications for funding, including fellowships and research activities only part-funded by NERC. Researchers funded by NERC who do not meet these requirements may have award payments withheld or become ineligible for future NERC funding.

## 5. Outline Data Management Plan (ODMP)

Although only a single page in length, your ODMP will be evaluated as part of the standard NERC grant assessment process and therefore should be carefully considered. You are required to provide both general information about research data management and a table that relates to specific datasets you expect to create.

### 5.1 Metadata

Metadata<sup>11</sup> is 'data about data' and is information (or cataloguing information) that enables data users to find and/or use a dataset. In your ODMP you should outline plans for documenting your research data, to meet both your own needs and those of later users.

In attempting to organise and document your data it may help to imagine another data user trying to make sense of your data in your absence, after the end of your project. If presented with only

---

<sup>11</sup> Metadata, <http://www2.le.ac.uk/services/research-data/organise-data/metadata>

the data itself, another user may be faced with the difficult task of ‘unpicking’ it. How will they make sense of your file and folder naming conventions? Has any special software been used to create your data? What extra information would they need to make maximum use of it?

A specific metadata standard, the NERC Discovery Metadata Standard<sup>12</sup>, has been created by NERC for this purpose, and it may be advisable to adopt this as early as possible during the life of your project.

## 5.2 Data Storage

It is recommended that, as you create data, you should store it in the University’s Research File Storage facility (RFS), managed by IT Services. All those with research storage needs are able to register for this service in order to be allocated a storage allocation appropriate to the project<sup>13</sup>. Researchers are not charged for this service (unless requirements are extremely large), it offers peace of mind (for the researcher and research funder) and reduces researcher IT responsibilities, being managed by IT Services as a secure service, backed-up daily. The back-up procedures, policies and controlled access arrangements used by the RFS are of a high standard and a description of them can be provided for your application. If you do not intend to make use of RFS, your data storage provider’s back-up procedures should be described instead. If you will be working collaboratively with other institutions, make sure that the security and back-up procedures of each data holding partner are described within the DMP.

Your ODMP should also briefly describe how you’ll keep your data safe *before* it’s deposited in a secure storage facility (such as RFS). This is particularly important if you’re conducting field research. As a minimum, try to ensure that at all times more than one copy of the data exists, and that every copy can easily be accounted for and located, if required. Mobile devices (laptops, external drives, voice recorders etc.) should be encrypted and put in place appropriate data transfer processes from these to secure storage.

If you expect to need any specialised help with creating or managing your data, such as help with database design, you should also mention this in the ODMP.

## 5.3 Data Quality

Your ODMP should describe how you will ensure the quality of your research data. Quality should be considered whenever data is created or altered, for instance at the time of data collection, data entry or digitisation. It may be appropriate to nominate a research data manager within the team and outline the procedures they will use to ensure data quality, such as dedicated time to check data, entering values into pre-prepared databases, or using templates. If you plan to integrate student data in to your datasets, you should mention this within the ODMP.

## 5.4 Ethics, IPR and data protection issues

NERC expects funding applicants to investigate any likely ethical or Intellectual Property Rights (IPR) issues that are likely to affect your ability to share your data, and these should be mentioned in the ODMP. If you are planning to use existing data as part of your research, the data may be subject to certain copyright or other restrictions that could prevent you from sharing any new data you derive

<sup>12</sup> NERC Discovery Metadata Standard, [http://www.data-search.nerc.ac.uk/documents/metadatastandard\\_v1.0.pdf](http://www.data-search.nerc.ac.uk/documents/metadatastandard_v1.0.pdf)

<sup>13</sup> Research File Storage, <http://www2.le.ac.uk/offices/ithelp/services/rfs>

from them. You should give full and appropriate acknowledgement, via citation, for any existing data you expect to use.

Unless stated otherwise, the ownership of intellectual property lies with the organisation carrying out the research. If you plan to work collaboratively with an external partner, copyright and IPR issues should be clarified in a Consortium Agreement. This isn't required as part of your application, but it should be mentioned that if the application is successful such an agreement will be created. All partners should be aware before applying for funding that a Consortium Agreement will be forthcoming. University Enterprise and Business Development<sup>14</sup> prepare Consortium Agreements and can advise on other IPR issues.

ESRC grant holders must adhere to the requirements of the Data Protection Act 1998. If you plan to handle sensitive, personal data, extra security measures must be considered. Information Assurance Services<sup>15</sup> can provide more advice on observing Data Protection legislation.

## 5.5 Table of datasets

It may be difficult for you to predict accurately the nature and extent of the datasets your project will generate, therefore NERC only requires you to make an estimate at the funding application stage. You won't necessarily need to mention everything, only the most significant datasets that are likely to have long-term value. If you are uncertain whether or not a dataset is likely to have long-term value, it may help to look at the NERC Data Value Checklist (see 6. [Assessing data value](#)). Although this tool is primarily intended to be used when preparing a more detailed data management plan you may also find it useful during the process of creating an ODMP.

For each dataset which you intend to generate and which you believe may have long-term value, you should provide the following information in a table:

- [Data Centre](#) - the name of the most appropriate NERC Data Centre. If you're unsure which Data Centre is the most appropriate for deposition of your data, visit the Data Centre's own website and read its collections policy. If you're still in doubt, it might help to send the Data Centre/s concerned a brief description of your dataset and ask their opinion on its suitability for deposition. Individual projects can contribute to more than one Data Centre.
- [Dataset description](#) - a brief (one or two sentence) description of the data. Examples might be 'photographs of field area' or 'raw broadband magnetotelluric data'.
- [Release date for giving data to Data Centre](#) - if you don't have a specific date, you can specify a period such as 'by the end of the project' or 'during year two'. It is expected that data should be delivered to a NERC Data Centre within two years of end of data collection.
- [Re-use scenarios](#) - if you have an idea of the type of secondary user who might make use of your dataset, describe them here in one or two sentences. Examples might be 'oceanographic researchers' or 'commercial researchers'

<sup>14</sup> University Enterprise and Business Development, <http://www2.le.ac.uk/offices/ebd>

<sup>15</sup> Information Assurance Services, <http://www2.le.ac.uk/offices/ias>



## 6. Assessing data value

The NERC Data Value Checklist is a tool to help you assess the long-term value of a dataset when preparing a full data management plan, although it may be of use when preparing an ODMP.

The Checklist informs all decisions that NERC Data Centres make on the acquisition, preservation and eventual disposal of environmental data. The criteria described in the Checklist do not directly indicate whether or not the data should be considered 'valuable', but instead offer guidance on assessing long-term value.

*Mandatory criteria* (criteria which require the retention of data) are:

- Legal or legislative reasons for data retention (for example, compliance with the Environmental Information Regulations or contractual obligations).
- Data likely to be the subject of legal challenge or of litigation.

*Important Criteria* (criteria which strongly suggest the retention of data) are:

- Data which are new and unique.
- Data which are irreplaceable (for example, data arises from observations and sampling rather than repeatable simulations or experiments).
- Data that has a broad extent and so is widely re-usable.
- Data which are of special scientific or communal importance.
- Data which sets an important precedent.
- Data which are part of a wider, current trend in science.
- Data which are likely to meet future needs.
- Data which adds value to an existing dataset.
- Data which has clear potential for reuse.
- Data which are likely to be cited within a publication.

*Supporting Criteria* (criteria which suggest the retention of data) are:

- 'Raw' and unprocessed data.
- Data that would be expensive to reproduce.
- If the deposited version is likely to be the reference version of the dataset.
- Accurate and detailed metadata accompany the data, to support any future re-use.
- More high value data than low value data in the dataset.
- Data in a format which supports deposit in a data centre and subsequent storage and preservation.
- Permissions are in place to permit data re-use.
- No special software is required to use the data so the data could easily be converted into a more widely used format.

## 7. Data Management Plan (DMP)

Once you have successfully acquired research funding, your ODMP will be used (in conjunction with the most appropriate NERC data centre) to help produce a fuller and more detailed DMP. The main purpose of the full DMP is to ensure that datasets of long-term value are deposited with the Data Centre in an appropriate format and along with the necessary metadata. The full DMP must be produced within three months of the project's starting date.

Your full DMP will expand on the following areas: backup and security, metadata and documentation, data management responsibilities (for example, who is responsible for capturing data in the field, producing metadata, transferring metadata and data), expected sizes and formats of datasets, potential challenges relating to data transfer or re-usability (such as exceptional size or complexity), plans for data preservation, and details of any existing datasets to be used during the project.

## 8. Data submission and access

The appropriate NERC Data Centre should be provided with a copy of your finalised data as soon as possible after the end of data collection. This will allow the data centre to check that all the necessary information for readily allowing others to re-use the data is included in the documentation. NERC will, however, allow funded researchers a reasonable amount of time to finalise their datasets and publish their findings, during what is known as an ‘embargo period’. NERC considers that in most cases a reasonable embargo period is a maximum of two years from the end of data collection. Data submitted to a data centre during an agreed embargo period will remain restricted for the period defined, though many researchers choose not to apply an embargo period and are happy for their data to be made available to others once they have been finalised.

Once your data has been deposited with a NERC Data Centre and made accessible, it will be accompanied by a data licence. In general, all data made available by the NERC Data Centres can be accessed by anyone. In the case of some third-party datasets however, there may be restrictions on who can access the data or what can be done with them, and any such restrictions will be made clear when the data are requested. The data licence will also specify that users of the data must acknowledge the originator of the data in any publication or other derived work.

In order to cite datasets which underpin research publications (see 4. [Researcher responsibilities](#)) data may be assigned a Digital Object Identifier (DOI) by a Data Centre. A DOI is a unique identifier that does not change over time and will serve as the ‘permanent online address’ of a specific dataset. A DOI will also help to support the tracking of data usage through the publication and citation of data sets. In order for the receiving Data Centre to issue a DOI, data must be deposited in good condition, with appropriate metadata and of a suitable level of technical quality. The submitter is responsible for ensuring data meets the required level of quality.

Metadata pertaining to all datasets held within the Data Centres will be made available through the NERC Data Catalogue Service<sup>16</sup>. This service provides an integrated, searchable catalogue of the data holdings of NERC's Data Centres, and can be used to find information on what data the NERC data centres hold and how to access these data.

## 9. Citing research data in research outputs

All journal articles and conference proceedings submitted for publication after 1 April 2013 which are the result of RCUK funded research must be made available for anyone to read without charge (made available on ‘open access’). Open access means that anyone with an internet connection can read your research paper or conference proceeding without the frustration of hitting a

---

<sup>16</sup> NERC Data Catalogue Service, <http://data-search.nerc.ac.uk/>

subscription or publisher paywall. The benefits in terms of wider dissemination, greater openness and transparency, and speeding up of discovery are considerable.

This requirement includes providing a means by which third parties can access any underpinning research datasets. This may be a reference (such as a unique URL or DOI) printed in a paper, which will lead an enquirer to a specific web page where the data is available. The enquirer might be directed to a page which displays the contact details of a custodian of the data, whom they are asked to email in order to gain access to the data.

Given the extended timescales involved in this process (possibly extending beyond the mandatory three years mentioned above), it is strongly recommended that the authors of published academic outputs *do not provide their current contact details* as a means of accessing underpinning research data, as these details will change over time. If you plan to use an established data repository service, ask this service for a unique reference identifier which could be included in the publication instead. If you are not planning to use an established data repository service, contact [researchdata@le.ac.uk](mailto:researchdata@le.ac.uk) or the Library for further guidance.

## 10. University RDM Principles

In 2014 the University agreed its **RDM Principles**<sup>17</sup> which act to guide researchers and inform funders of the University approach and should be referred to in funding proposals.

*Research data are defined as any material created or collected for the purposes of analysis to generate and validate original research results, irrespective of the format of data. Research data may be digital, paper based or in other forms. Examples of different types of research data include datasets, images, text (such as transcripts of interviews), audio and video recordings, and computer scripts.*

### **Scope**

1. *These principles apply to all research conducted at the University, regardless of funding source. They do not imply additional compliance where good practice and relevant research funders' requirements are already being followed.*

### **Research inception and planning**

2. *Data management planning is an integral, essential and dynamic component of the research process from inception and should include provision for the selective long term custodianship of research data.*

<sup>17</sup> RDM Principles, [http://www2.le.ac.uk/services/research-data/documents/uol\\_rdmprinciples](http://www2.le.ac.uk/services/research-data/documents/uol_rdmprinciples)

3. *Research proposals should include all possible recovery of direct costs of research data management where the funder allows this.*

#### ***During the research: management and storage of data***

4. *During the research process, data are an asset which needs to be appropriately managed and stored: to meet legislative, funder, information governance and University requirements; to facilitate data security (confidentiality, integrity, availability); to facilitate appropriate access, collaboration and sharing of data and results.*
5. *Data can be actively managed throughout, following and updating the data plan, recognising that storage and its funding is not infinite, with ongoing decisions regarding retention and destruction.*

#### ***After the research: retention, sharing, publishing, citation, re-use***

6. *When the research has been completed, research data (including websites) of long term value, or data required by funders or the University must be selected for retention, then preserved and curated for as long as appropriate.*
7. *Data retained in these circumstances must be offered to funder or discipline repositories and/or to the UK Web Archive as appropriate. If such repositories are unavailable or unsuitable, data must be stored in a University repository. Data deposited with external repositories or unsuitable for making open access must be registered with the University.*
8. *There is a presumption of open access to data held in a University or other public repository. However, access may be restricted, subject to a time embargo or not permitted for legal (i.e. intellectual property, data protection, confidentiality, contractual requirements), ethical or commercial reasons.*
9. *Data should not be deposited with any organisation that does not commit to appropriate access and availability for re-use and exclusive rights to re-use or publish research should not be handed to commercial publishers, unless this is a condition of funding.*
10. *The re-use or sharing of data that are made available should not be unnecessarily restricted by licences or terms of use.*
11. *All research outputs must cite data produced and/or used during research as appropriate, detailing access to that data.*

#### ***Responsibilities***

12. *Primary accountability for research data management lies with the most senior University researcher associated with the work or project. Responsibility for research data management may be delegated.*

13. *During the research process, researchers are responsible for adherence to legal requirements such as Data Protection and for the creation of metadata and other documentation that enables data to be discoverable, understandable and re-useable.*
14. *After the deposit of data with a repository, the repository is responsible for the on-going management of that data in accordance with legal, technical and other requirements.*
15. *The University will be responsible for providing a Research Data Management service led by the Library to include training, advice, guidance and data curation.*
16. *The University will secure sustainable solutions that meet the requirements for long term data storage and re-use as set out in these principles.*

## The Managing Research Data guide series comprises:

- An Introduction to Managing Research Data – For Researchers and Students
- Data Management Planning – AHRC funding applicants
- Data Management Planning – BBSRC funding applicants
- Data Management Planning – EPSRC funding applicants
- Data Management Planning – ESRC funding applicants
- Data Management Planning – MRC funding applicants
- Data Management Planning – NERC funding applicants
- Data Management Planning – STFC funding applicants
- Data Management Planning – Non-RCUK funding applicants

They are part of a range of RDM material produced by the University, all available via [www.le.ac.uk/researchdata](http://www.le.ac.uk/researchdata).

**University of Leicester**

**What would you do if you lost your research data tomorrow?**  
Take the research data health check... and find help to secure, share and exploit your valuable research.

Chances are you could use some helpful pointers in all of these!

Create	Organise	Keep	Find & Share
<p><b>Have you...</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>fully understood your research funders' data management requirements?</b> Government and funders require that publicly funded research is made available for reuse – are you up to date with their latest policies? Your future funding might depend on it!</li> <li><input type="checkbox"/> <b>written a data management plan?</b> Your funder may already require this, but build it in from the proposal stage to avoid headaches in the future.</li> <li><input type="checkbox"/> <b>gained ethics approval/consent?</b> Writing a data management plan with all planning and help you to navigate ethics and governance requirements.</li> <li><input type="checkbox"/> <b>protected your intellectual property?</b> Using intellectual property considerations for a data file could have an appropriate credit, ensuring career prospects and perhaps your financial future too!</li> </ul>	<p><b>Are your research files and data...</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>clearly described, in terms of content (using standardised nomenclature)?</b> All research is at risk of being lost! Will you be able to remember how you generated your data, and will you or anyone else be able to find it in the future when you wish to reuse and share?</li> <li><input type="checkbox"/> <b>clearly labelled with versions and dates?</b> How will you remember which was the definitive version and which added new data to existing data?</li> <li><input type="checkbox"/> <b>logically structured and named?</b> Once you've remembered how you generated data, can you still find the relevant file?</li> <li><input type="checkbox"/> <b>future proofed against broken links, using persistent identifiers?</b> The persistent identification of digital resources can play a vital role in ensuring that accessibility and usability over time using recommended data standards.</li> </ul>	<p><b>Do you know...</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>how to restrict access to your research data to the right people?</b> Have you consulted with university or data centre experts to find out the right people have access to your research?</li> <li><input type="checkbox"/> <b>which data to keep and which data to discard?</b> Managing research data effectively means being selective: which data to discard and when is well as what to keep and for how long?</li> <li><input type="checkbox"/> <b>how securely your data is stored?</b> What happens if your storage media fails? Have you backed it up? Could it get left on the train and could somebody else misuse it?</li> <li><input type="checkbox"/> <b>how your data is backed-up?</b> Have you made use of university and/or external resources to back up data so that you have multiple copies in case of loss or theft?</li> </ul>	<p><b>Do you know how to...</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>find existing information resources related to your research?</b> Where can you find research data that you can re-use or combine with your own to produce new research?</li> <li><input type="checkbox"/> <b>share data with your collaborators securely and effectively?</b> Whether building a collaborative proposal, generating results for others to comment on or sharing the final outputs of your research – how will you live with your colleagues' view of what you share?</li> <li><input type="checkbox"/> <b>deposit your research data and outputs in an open repository?</b> Is there an appropriate discipline or institutional repository and what do you need to do to deposit your research output? Plan ahead to avoid reformatting.</li> <li><input type="checkbox"/> <b>publish your research, and get it cited as well?</b> Institutions and data centres must make research data available to others while protecting credit to the researcher who did the work. Your future career could depend on it!</li> </ul>

To find information, support, advice and training, as well as links to external resources, go to [www.le.ac.uk/researchdata](http://www.le.ac.uk/researchdata) or email: [researchdata@le.ac.uk](mailto:researchdata@le.ac.uk)



© University of Leicester  
Leicester LE1 7RH  
UK

[www.le.ac.uk](http://www.le.ac.uk)