

# **Data Management Planning:** What, Why, How?



With thanks to Sarah Jones & other DCC colleagues

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# What we will cover today

- What are DMPs?
- Why are they important?
- Implementation in UK (look at funders, researchers, universities)
- Examples of requirements
- Tools and resources to support them

# WHAT ARE DATA MANAGEMENT PLANS?

# Rather.. What is data management?

- Thinking in advance about data collection, management, disposal, protection, description, reuse
- Active work during research to ensure data is used to support current (and future) research objectives
- Ensuring useful data survives the project and ends up somewhere that can care for it (and make it citable and reusable)
- Part of good research design

A data management plan is a document which captures and documents this part of the project planning

# What is a Data Management Plan?

A short plan that outlines:

- what data will be created and how
- how it will be managed (storage, back-up, access...)
- plans for data sharing and preservation



# Possible elements of a plan

- Introduction & context
- Legal, rights & ethical issues
- Access, data sharing & re-use
- Data collection / development methods
- Data standards
- Short-term data storage & data management
- Deposit & long-term preservation
- Resourcing
- Compliance & review
- Agreement/ratification by stakeholders

For some areas of research, some of these areas will be empty or irrelevant – that doesn't matter

# WHY HAVE PLANS?

# Why care about data?

- Data is expensive an investment
- Reuse:
  - More research
  - Teaching & Learning
  - Planning
- Impact with or without publication
- Accountability
- Legal requirements

### Research data has value

- Huge lost potential through not making data findable and reusable
- Benefits to researcher, funder, university and to society
- Reusable data makes research quicker, cheaper, better
- Good data management ensure this happens
- Plans document our intent allow problems to be fixed quickly

"Provision for data management, for curation and long-term preservation, and for the sharing and re-use of data, varies wildly between subject areas."

The data management needs of many researchers are little considered or catered for.

If greater provision is to be made, a shortfall in infrastructure (both technical and human) must be overcome.

Policy makers are aware that in many areas of enquiry, researchers' access to well-managed, open and reusable data opens up significant opportunities.

### Yet...

- "No battle plan survives contact with the enemy"
  - Helmuth von Moltke the elder
- "... I have always found that plans are useless, but planning is essental"
  - Dwight D. Eisenhower
- The data management plan is an evolving object, along with the research

# Why develop a DMP?

DMPs are often submitted with grant applications, but are useful whenever researchers are creating data.

#### They can help people to:

- Make informed decisions to anticipate and avoid problems
- Avoid duplication, data loss and security breaches
- Develop procedures early on for consistency
- Ensure data are accurate, complete, reliable and secure
- Save time and effort to make research easier!

# EXAMPLE REQUIREMENTS

# **Funder requirements**

Full Coverage Partial Coverage No Coverage

|                     | Policy Coverage   |      | Policy Stipulations |              |                    |                    |            | Support Provided |            |                |       |
|---------------------|-------------------|------|---------------------|--------------|--------------------|--------------------|------------|------------------|------------|----------------|-------|
| Research<br>Funders | Published outputs | Data | Time<br>limits      | Data<br>plan | Access/<br>sharing | Long-term curation | Monitoring | Guidance         | Repository | Data<br>centre | Costs |
| AHRC                | •                 | •    | •                   | •            | •                  | •                  | 0          | •                | 0          | •              | •     |
| BBSRC               | •                 | •    | •                   | •            | •                  | •                  | •          | •                | •          | •              | •     |
| CRUK                | •                 | •    | •                   | •            | •                  | •                  | •          | 0                | •          | 0              | 0     |
| EPSRC               | •                 | •    | •                   | •            | •                  | •                  | •          | •                | 0          | 0              | •     |
| ESRC                | •                 | •    | •                   | •            |                    | •                  | •          | •                | •          | •              | •     |
| MRC                 | •                 | •    | •                   | •            |                    | •                  | 0          | •                | •          | 0              | •     |
| NERC                | •                 | •    | •                   |              | •                  | •                  | •          | •                | •          | •              | •     |
| STFC                | •                 | •    | •                   | •            | •                  | •                  | •          | •                | •          | •              | •     |
| Wellcome<br>Trust   | •                 | •    | •                   | •            | •                  | •                  | •          | •                | •          | •              | •     |

# **RCUK policy - The 1-minute version**

- Research data are a public good make openly available in timely & responsible way
- Have policies & plans. Data with long-term value should be preserved & usable
- Metadata for discovery & reuse. Link publications & data
- Sometimes law, ethics get in the way. We understand.
- Limited embargos OK. Recognition is important always cite data sources
- OK to use public money to do this. Do it efficiently.

# **EPSRC** policy points

- Awareness of regulatory environment
- Data access statement
- Policies and processes
- Data storage

Compliance expected by 2015

- Structured metadata descriptions
- DOIs for data
- Securely preserved for a minimum of 10 years from last use

# Funders are making demands



Excellence with Imp

- Public good
- Preservation

very

NERC Data Policy

This is appropriate appropriat

Resea

11. All applications for NERC funding must include an outline Data Management Plan, which must identify which of the data sets being produced are considered to be of long-term value, base eria in NERC's Data Value Capplication must also needed to implement Management Plan.

12. The outline data management plan will be evaluated as part of the standard NERC grant assessment process. All successful applications will be required to produce a detailed data management plan in conjunction with the appropriate NERC data centre. tiality

iion nding



#### Dissemination and Sharing of Research Results

**NSF Data Sharing Policy** 

Investigators are expected to share with other researchers, at no more than incremental cost and within a reasonable time, the primary data, samples, physical collections and other supporting materials created or gathered in the course of work under NSF grants. Grantees are expected to encourage and facilitate such sharing. See <a href="Award & Administration Guide (AAG) Chapter VI.D.4">Amard & Administration Guide (AAG) Chapter VI.D.4</a>.

#### NSF Data Management Plan Requirements



Proposals submitted or due on or after January 18, 2011, must include a supplementary document of no more than two pages labeled "Data Management Plan". This supplementary document should describe how the proposal will conform to NSF policy on the dissemination and sharing of research results. See <a href="Grant Proposal Guide (GPG)">Grant Proposal Guide (GPG)</a> Chapter II.C.2.j for full policy implementation.

# **NSF-OCI** TASK FORCE on Data and Visualization : Report

http://www.nsf.gov/od/oci/taskforces/



# Some other funders that require DMPs or equivalent



BILL&MELINDA GATES foundation







National Science Foundation







ACADEMY OF FINLAND





## Five common themes

- Description of data to be collected / created (i.e. content, type, format, volume...)
- 2. Standards / methodologies for data collection & management
- 3. Ethics and Intellectual Property (highlight any restrictions on data sharing e.g. embargoes, confidentiality)
- Plans for data sharing and access (i.e. how, when, to whom)
- 5. Strategy for long-term preservation

# UK EXPERIENCE

# Regulatory requirements

- Data protection, freedom of information, research ethics – all apply to data in UK
- If data is badly managed:
  - Compliance is hard
- Know what you deleted (and why) as well as what you have kept
- Ensure consent forms allow for widest possible reuse
- Data management plans must deal with regulatory as well as funder requirements – true in all countries

#### RESEARCH

#### Evacllance with Impact

### General principles applying to all government-funded research

# Policy

#### a Policy

he Research Councils' remit and is undertaken id to a coherent approach across the research vide an overarching framework for individual



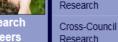


Engagement

with Research

Knowledge

Exchange and



Research Infrastructure

Areas of

Themes

Research Priorities

Peer review

Eligibility for Research Council fundina

How to apply for research funding

Applications which may cross Research Counci

Terms and Conditions of Research Counci fEC Grants

Terms and Conditions of Research Counci Training Grants

Open Access

**Data Policy** 

Efficiency

Research Council policies on data policy.

#### **Principles**

- Publicly funded research data are a public good, produced in the public interest. made openly avail
- Institutional and pr be preserved and
- does not harm inte Translated by different funding relevant standards councils to suit their areas of

#### • To enable research

- should be recorded .... research and re-use potential of the data. Published results should always include information on how to access the supporting data.
- RCUK recognises that there are legal, ethical and commercial constraints on release of research data. To ensure that the research process is not damaged by inappropriate release of data. research organisation policies and practices should ensure that these are considered at all stages in the research process.
- To ensure that research teams get appropriate recognition for the analysing data, those who undertake Research Council funded period of privileged use of the data they have collected to enable research. The length of this period varies by research discipline discussed further in the published policies of individual Researc
- In order to recognise the intellectual contributions of researcher key research datasets, all users of research data should acknow abide by the terms and conditions under which they are accessed.
- It is appropriate to use public funds to support the management and sharing of publicly-funded research data. To maximise the research benefit which can be gained from limited budgets, the mechanisms for these activities should be both efficient and cost-effective in the use of public funds.

Most place requirements on the researcher – one places requirements on the university

2012 - 02 - 07DEIC Workshop; (c) Kevin Ashley; CC-BY



# **Result for UK policy**

- Emergence of university policies alongside funder policies
- Partly to ensure compliance with funder requirements – partly for own interests
- Also roadmaps to demonstrate routes towards full compliance

#### RESEARCH DATA MANAGEMENT

Enter search term

Search

This site University of Oxford

People



UAS Home > Research Data Management >

- . Why manage your data?
- Data Management Planning
- Data Backup and Security
- Data Sharing and Archive
- Training, Advice & Support

# University of Oxford commitment to research data management:



"The University of Oxford is committed to supporting researchers in appropriate curation and preservation of their research data, and where applicable in accordance with the research funders' requirements."

NB. Clicking on this link will take you out of the current site) (Source: PRAC ICT Sub-committee)

#### Research Data Management

Good practice in data management is one of the core areas of research integrity, or the responsible conduct of research.

The following diagram provides further insight to some of the stages involved in research data management, and the facilities and services available to help, both within the University and from external providers.

#### Strains & ARCHIVE Data Management Planning Checklist DATAMANAGEMENT Funder share? Training, DATA BACKUR & SICURITY Advice and Content of Data Support Management Plans Ethical Data and Legal Backup Considerations Organisation and Documentation

#### Quick links

- Data management planning checklist
- > Funder policies
- Training, advice & support
- 101 Flyer 'Managing your research data at The University of Oxford' ☐ (916kb)

#### Find out more

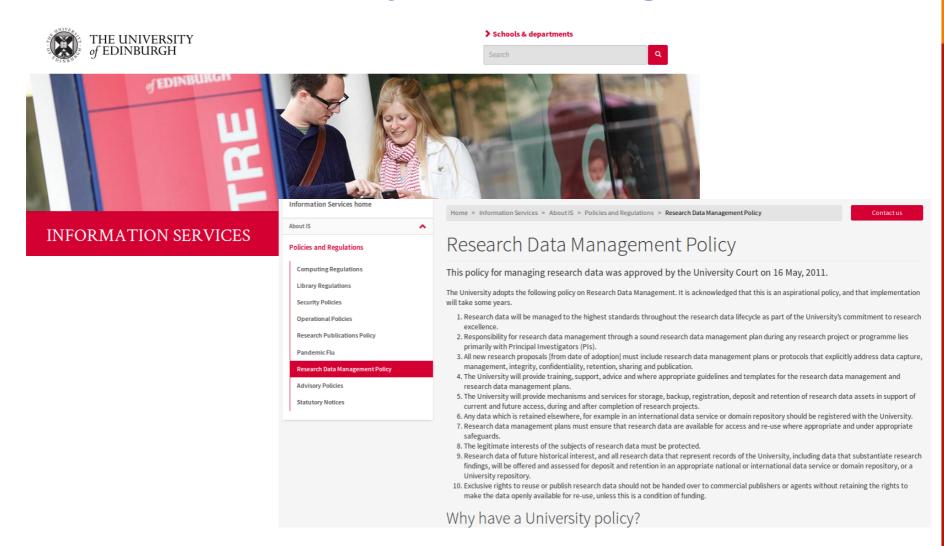
 May 2011 - UK Data Archive - Managing and Sharing Data

#### What's new

- EPSRC has launched a new Policy Framework on Research Data (with effect from 1 May 2011)
- ESRC April 2011 Data Management Plans now compulsory
- January 2011 Wellcome Trust et al: Sharing research data to improve public health: joint statement of purpose (external link)

# Institutional Policy

# **Policy at Edinburgh**



http://www.ed.ac.uk/information-services/about/policies-and-regulations/research-data-policy





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Staff directory | A-Z index | Site map

Search

Find

Monash University > Policy > Policy-bank > Academic > Research

#### **Monash University Policy Bank**

## **Institutional Policy**

#### **Research Data Management Policy**

| Purpose          | The purpose of this policy is to ensure that research data is stored, retained, made accessible for use and reuse, and/or disposed of, according to legal, statutory, ethical and funding bodies' requirements.  |
|------------------|--|
| Scope            | All Monash University staff, adjuncts, visitors and students engaged in research ('researchers') in all disciplines, irrespective of their location; and All research data, regardless of format, and subject to the provisions of any relevant contracts or funding/collaboration agreements  |
| Policy Statement | Monash University acknowledges that research data management must be consistent with relevant legislation, codes and guidelines. This policy and its associated procedures first and foremost support its commitment to comply with the <u>Australian Code for the Responsible Conduct of Research (2007)</u> ('the Code'), 'Section 2: Management of Research Data and Primary Materials'. The Code states that all individuals and institutions engaged in research have a responsibility to manage research data well, by addressing ownership, storage and retention, and access, over and beyond the end of the research project. |
|                  | In addition to the Code, this policy is guided by the Monash University Information Management Principles. Monash University also supports the guidelines and initiatives designed to improve access to publicly funded research data, including the OECD Principles and Guidelines for Access to Research Data from Public Funding (2007).  |
|                  | Monash University recognises significant value in the data generated by its large investment in research. Research data is valuable to researchers for the duration of their research and may have ongoing value. Durable research data is essential to justify, and defend when required, the outcomes of the research. Research data may also have value for other researchers or the wider community.   |



Home > Resources for Digital Curators > Policy and Legal

#### Policy and Legal

#### In this section

Curation Reference Manual

Curation Lifecycle Model

#### **Policy and Legal**

Overview of Funders' Data

Policies

Funders' Data Policies

Institutional Data Policies

Policy Tools and Guidance

Freedom of Information

**FAQs** 

MRC Data Plan FAQs

Open Source FAQs

Data Management Plans

Case Studies

Tools and Applications

**Briefing Papers** 

How-to Guides

Standards

Publications

External Resources

#### Policy resources

#### Overview of Funders' Data Policies

A table and short summaries comparing research funders' policies

#### Funders' Data Policies

Detailed overview of each funder's policy, stating requirement for data plans, expectations on data sharing and available support.

#### Institutional Data Policies

A table listing example of UK universities research data policies. Add your examples!

#### Policy Tools and Guidance

Annotated bibliography of: 1) tools and guidance for creating policies; 2) example policies; 3) publications; & 4) data management guidance.

#### Preservation policy template

Template to help repositories define preservation policies

#### Data management plans & DMP Online

Summary of what funders ask for in plans and the DCC's tool to

http://www.dcc.ac.uk/resources/policy-and-legal

# DCC Policy Summary

## Policy summary from ANDS



#### nd research data:

#### bout ANDS

Projects & Funding

Our Approach

**Events** 

#### or Researchers

Manage Data

Publish Data

Find Data

#### or Partner Institutions

Make Connections

lanaging Data

Guides

#### ublishing Data

Licensing

Online Services

Content Providers Guide

Technical resources

#### lews

Newsletter

ommunity Bulletin Board

#### Institutional policies and procedures

Institutional policies and procedures, which might include guidelines, protocols and standards, are fundamental to good research data manager

- support the Australian Code for the Responsible Conduct of Research
- · be up to date
- address data-related issues (many institutions already have policies on the topics listed below but these may pre-date the latest version of
- . be widely publicised to all those who have a role in ensuring that research data is well managed, ie researchers, data managers
- include compliance measures.

In some instances, research institutions have sensibly opted to combine policies on topics which are related. In some cases, policies may not s to be consistent with, supportive of and supported by the institution's overall research data management policy.

#### Research data management

A number of ANDS guides deal with research data management policy.

- Research Data Policy and the Australian Code for the Responsible Conduct of Research
- · What is research data?

The Research Data Management Policy Outline provides a list of elements which an institution may wish to consider when drawing up, or upda The following examples of research data management policies and procedures show different institutional approaches to the issue of research incorporated into the institutional policy on the Australian Code for the Responsible Conduct of Research.

- Griffith University, Code for the Responsible Conduct of Research (Section 6: Management of Research Data and Primary Materials)
- James Cook University. Code for the Responsible Conduct of Research.Part 2: Management of Research Data and Primary Materials.
- Queensland University of Technology. Management of Research Data Policy
- . University of Melbourne. Management of Research Data and Records (Draft)
- University of New South Wales. Research Code of Conduct. Section 8. Management of Research Material and Data.
- University of New South Wales. Procedure for Handling Research Material and Data
- University of Newcastle. Research Data and Materials Management Policy
- University of Newcastle. Research Data and Materials Management Procedure

# **DMP** template for postgraduates

Defining your data



Looking after your data

Sharing your data

Archiving your data

Executing your plan

http://opus.bath.ac.uk/30772

## **UEL workbook for PGRs**

Mixes sections to complete with DCC guidance on each topic

Now accompanied by template in DMPonline tool

Profiles support at UEL and they offer to review and provide feedback on researchers DMPs



# **Example templates from DMPonline**

University of East London has two templates in DMPonline

#### **POSTGRADUATE DMP**

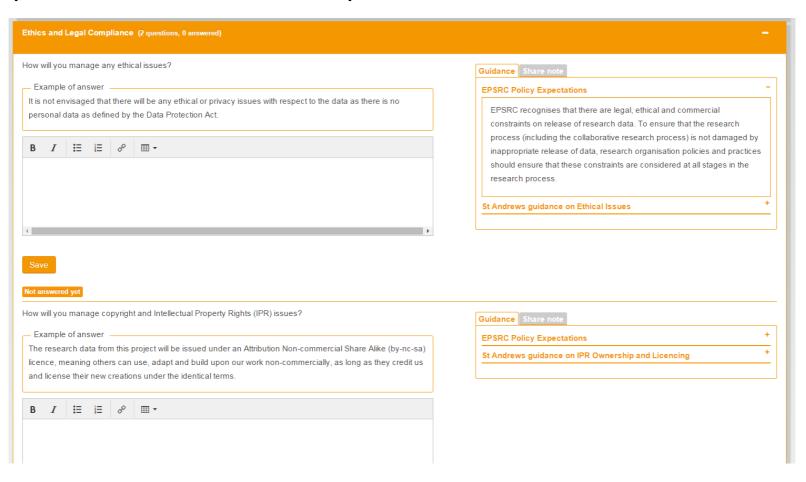
- Shorter six sections
- Less formal wording e.g. 'looking after your data'
- Straightforward guidance

#### STANDARD DMP

- 2 phases lite and full DMP
- 6-8 sections overall
- Questions more formal / factual
- Guidance longer and more directive

# **Example answers**

St Andrew's University has added example answers for every question in the EPSRC template



# Suggested answers

The University of Glasgow has template answer for the policy question in the MRC template.

The table is prepopulated with links to all the University policies.

| 7. Relevant institutional, departmental or study policies on data sharing and data security  |   |  |  |  |  |  |
|--|---|--|--|--|--|--|
| Please complete, where such policies are (i) relevant to your study, and (ii) are in the public domain, e.g. accessibly through the internet.  Add any others that are relevant (check for local policies in your school or group) |   |  |  |  |  |  |
| Policy   | URL or Reference  |  |  |  |  |  |
| Data Management<br>Policy &<br>Procedures  | Draft GU Research Data Management policy<br>http://www.gla.ac.uk/media/media 232425 en.docx   |  |  |  |  |  |
| Data Security  | IT Security Policies  |  |  |  |  |  |
| Policy   | http://www.gla.ac.uk/services/it/informationsecurity/policies   |  |  |  |  |  |
|  | Confidential Data Policy  |  |  |  |  |  |
|  | http://www.gla.ac.uk/services/it/informationsecurity/confidentialdata   |  |  |  |  |  |
|  | Data security issues are also covered to some extent by the<br>University's Data Protection policy  |  |  |  |  |  |
|  | http://www.gla.ac.uk/services/dpfoioffice/policiesandprocedures/dpa-<br>policy  |  |  |  |  |  |
|  | Policy on Confidential Data in the University   |  |  |  |  |  |
|  | http://www.gla.ac.uk/media/media_180727_en.pdf  |  |  |  |  |  |
| Data Sharing<br>Policy   | Data sharing is covered in the University's Code of Good Practice in Research   |  |  |  |  |  |
|  | http://www.gla.ac.uk/media/media 227599 en.pdf  |  |  |  |  |  |
|  | Data sharing is covered in a number of Ethics related policies. The policies are accessible via the Ethics Committee homepage   |  |  |  |  |  |
|  | http://www.gla.ac.uk/research/aims/ourpolicies/ethicshomepage   |  |  |  |  |  |
| Institutional<br>Information Policy  | The University of Glasgow lists all policies relevant to research conduct and interaction with the wider community  |  |  |  |  |  |
|  | http://www.gla.ac.uk/research/aims/ourpolicies  |  |  |  |  |  |
| Other:   | Details on relevant RCUK policies and draft GU EPSRC roadmap available at <a href="http://www.gla.ac.uk/services/datamanagement/rdm-at-gu">http://www.gla.ac.uk/services/datamanagement/rdm-at-gu</a> |  |  |  |  |  |
| Other  | For links to the University research ethics policies and working with animals, please see:<br>http://www.gla.ac.uk/research/aimsassessmentandpolicies/ourpolicies                                     |  |  |  |  |  |

# TOOLS AND RESOURCES

## **Example plans**

#### Example Data Management Plans

#### Technical plan submitted to the AHRC [PDF, 7 pages]

A DMP submitted by a researcher from the University of Bristol, also including comments from the reviewers

#### Two social science DMPs [PDF, 7 pages]

Example plans from researchers at the University of Leeds, shared as part of the Leeds RoaDMaP training materials

#### Rural Economy & Land Use (RELU) programme examples [webpage]

Two examples from a joint ESRC, BBSRC and NERC programme

#### Health sciences DMP [PDF, 11 pages]

Example DMP produced by the DATUM for Health RDM training project

#### Psychology DMP [PDF, 11 pages]

A very detailed, fictional psychology DMP produced by the DMTpsych RDM training project, based on a seminal psychology experiment

#### UCSD Example Data Management Plans [webpage]

Over 20 example plans submitted to the National Science Foundation (NSF) in the United States by academics at UC San Diego

#### Colorado School of Mines examples [webpage]

A variety of US example DMPs from Mines and elsewhere

#### NSF data management plans [webpage]

5 DMPs submitted to the NSF, shared by the DataOne initiative

#### Biology and chemistry DMPs [webpage]

Three example DMPs from the USA shared by NECDMC, an instructional tool for teaching RDM to undergraduates, graduate students, and researchers in the health sciences, sciences and engineering.

#### https://dmponline.dcc.ac.uk/help#PlanningHelp

# What data to keep

A Digital Curation Centre and Australian National Data Service 'working level' guide



# Roles and Responsibilities

#### Researcher ('data creator')

- Provide enough information for others to assess the research data's scientific and scholarly quality and compliance with disciplinary or ethical norms.
- Provide relevant information for the repository to identify who will use the data and how i.e. the 'designated community', and any specific access requirements or constraints.
- Provide the research data in formats recommended by the data repository.
- Provide the metadata requested by the repository.

#### How to Appraise & Select Research Data for Curation

Angus Whyte (DCC) and Andrew Wilson (ANDS)

#### Data centre or repository

- Make explicit its mission in the area of digital archiving, and its selection policy for digital objects.
- Ensure compliance with legal regulations and contracts.
- Ensure the authenticity and integrity of the digital objects and the metadata.
- Assume responsibility from the data producer for ensuring the digital objects are accessible and available to a defined 'designated community'.
- Plan for long-term preservation of the digital assets.





# How to Cite Datasets and Link to Publications

Alex Ball (DCC) and Monica Duke (DCC)

A Digital Curation Centre 'working level' guide



Digital Curation Centre, 2011. Licensed under Creative Commons Attribution 2.5 Scotland: http://creativecommons.org/licenses/by/2.5/scotland/ A Digital Curation Centre 'working level' guide



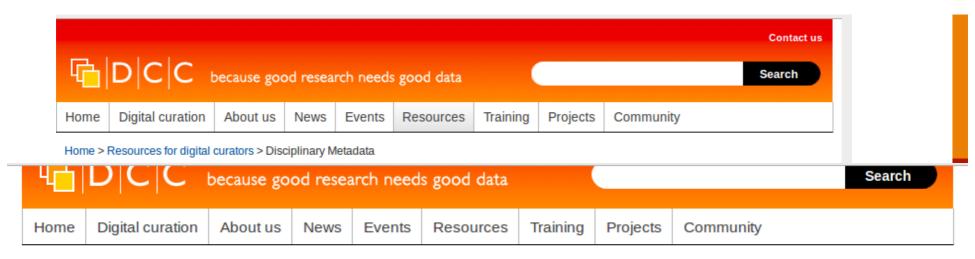
#### How to Develop a Data Management and Sharing Plan

Sarah Jones (DCC)



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Home > Resources for digital curators > Subject Areas > Earth Science

#### Earth Science

Palaeontology Geology Genomics Environmental Science Hydrology Hydrogeology
Botany Livestock Cartography Fish Farming Climatology Glaciology
Ecology Marine Biology Topography Geoscience Biogeography Molecular biology
Planetary science Agricultural Economics Hydrography Oceanography
Planning (Urban, Rural and Regional) Entomology Geography Meteorology
Minerology Multi-disciplinary Marine Science Agricultural Science
Biochemistry Genetics Soil Science

#### **Metadata Standards**

#### **AgMES - Agricultural Metadata Element Set**

A semantic standard for description, resource discovery, interoperability and data exchange for different types of agricultural information resources.

#### **CF (Climate and Forecast) Metadata Conventions**

A standard for climate and forecast "use metadata" that aims both to distinguish quantities (such as physical description, units, or prior processing) and to locate the data in space-time.

#### **DIF - Directory Interchange Format**

An early metadata initiative from the Earth sciences community, intended for the description of scientific

#### **Curation training**



Looking to develop your data management and curation skills? Learning is easy when you sign up for any of our introductions to digital curation, which cover all those activities you need to consider when planning and implementing new projects.

Read more



### **Data Management Plans and DMPonline**

Why is the tool needed and what does it do?

#### What is DMPonline?

A web-based tool to help researchers write data management plans

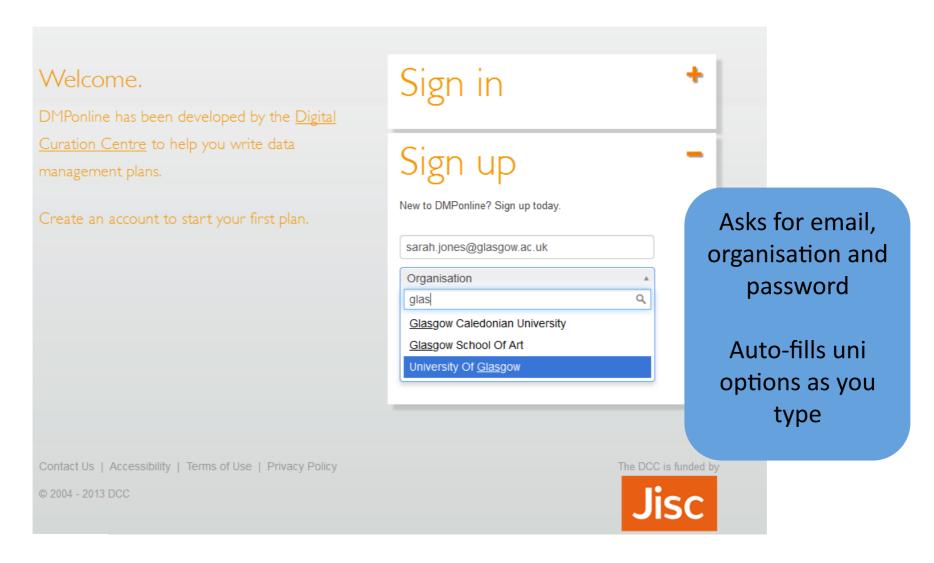
#### A short history

- Launched in April 2010 at the Jisc conference
- Released v.2 in March 2011 with extra functionality
- Released v.3 in April 2012 with revisions in light of the DMPTool and work from the Jisc MRD programme
- Released v.4 in December 2013, incorporating major changes from evaluation
- Bi-monthly release schedule now to add features

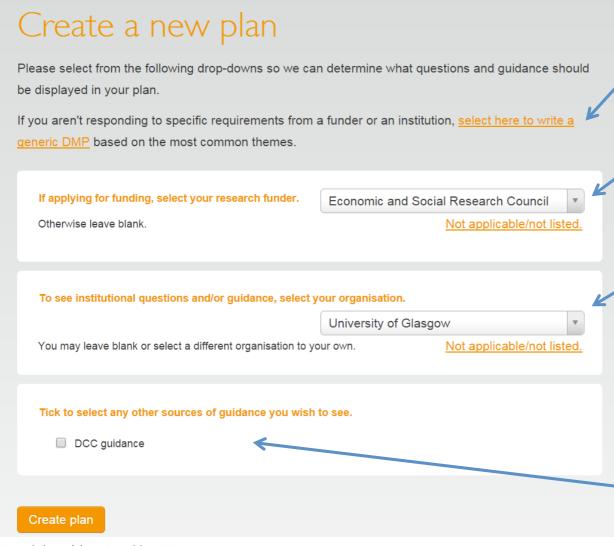
#### Main features in DMPonline

- Templates for different requirements (funder or institution)
- Tailored guidance (funder, institutional, discipline-specific etc)
- Ability to provide examples and suggested answers
- Supports multiple phases (e.g. pre- / during / post-project)
- Granular read / write / share permissions
- Customised exports to a variety of formats
- SAML (Shibboleth) authentication for single sign-on

### **Creating an account**



### **Creating a plan**



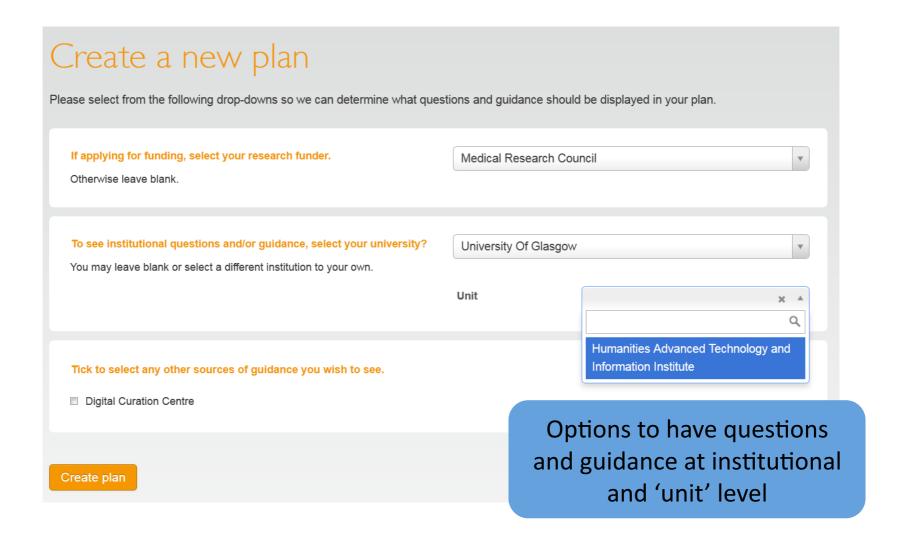
Click to write a generic DMP

Or choose your funder to get their specific template

Pick your organisation to add local guidance and to get the organisational template if there isn't a funder one

Choose any additional optional guidance

### Tailoring at multiple levels



# Summary of what's in a plan

#### This plan is based on:

under Eco

Economic and Social Research Council

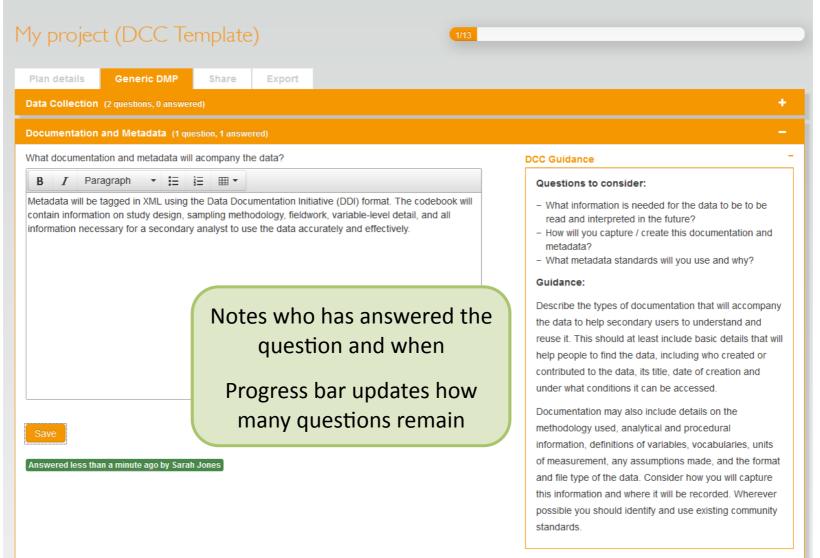
Answer question

Export

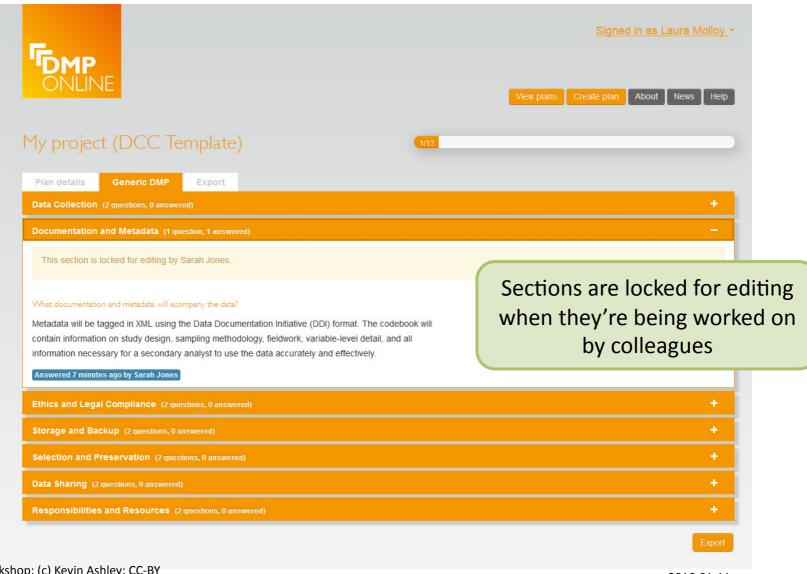
The ESRC requires that all applicants seeking ESRC funding include a statement on data sharing in the relevant section of the Je-S application form. If data sharing is not possible, the applicant must present a strong argument to justify their case.

| Sections   | Questions  |  |
|--|--|--|
| Existing data  | <ul> <li>An explanation of the existing data sources that will be used by the research project (with references)</li> <li>An analysis of the gaps identified between the currently available and required data for the research</li> </ul> |  |
| Information on the data that will be produced                            | - Methodologies for data collection - Data volume and data type, e.g. qualitative or quantitative data - Data quality, formats, standards documentation and metadata   |  |
| Planned quality assurance and back-up procedures (security/storage)      | - Quality Assurance<br>- Back-Up   |  |
| Management and archiving of collected data                               | - Plans for management and archiving of collected data   |  |
| Overcoming data sharing difficulties                                     | - Expected difficulties in data sharing, along with causes and possible measures to overcome these difficulties.   |  |
| Consent, confidentiality, anonymisation and other ethical considerations | - Explicit mention of consent, confidentiality, anonymisation and other ethical considerations   |  |
| Copyright and intellectual property ownership of the data                | - Copyright and intellectual property ownership of the data  |  |
| Responsibilities for data management and curation                        | - Responsibilities for data management and curation within research teams at all participating institutions  |  |

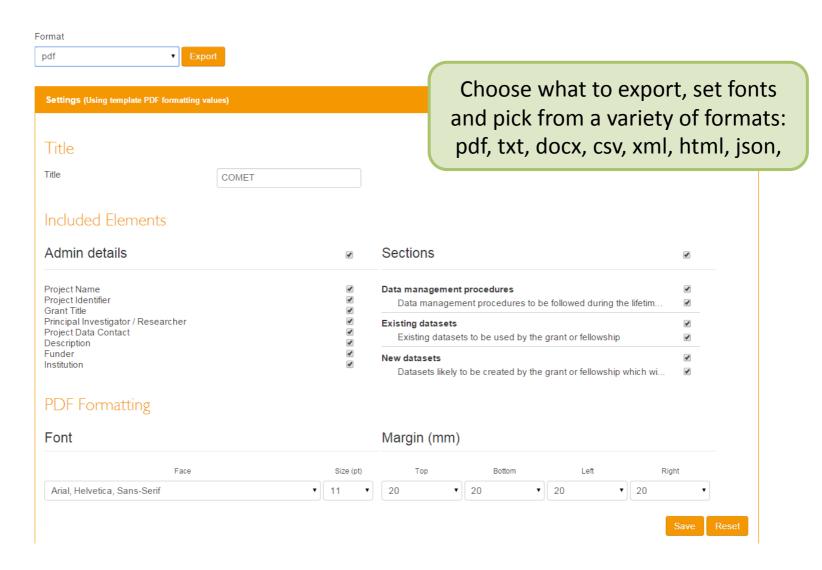
### **Answering questions**



### **Co-writing DMPs**



### **Exporting plans**





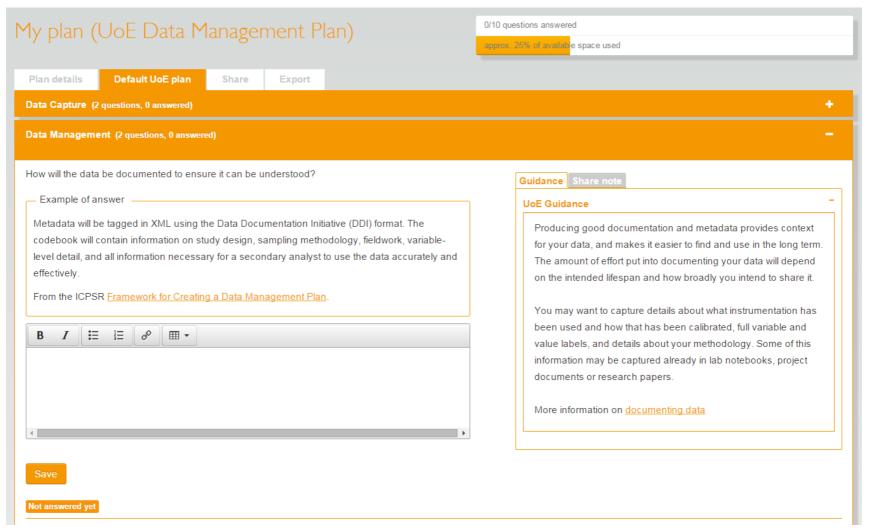
## **Customising DMPonline**

Tailoring the tool to gather info and present available support

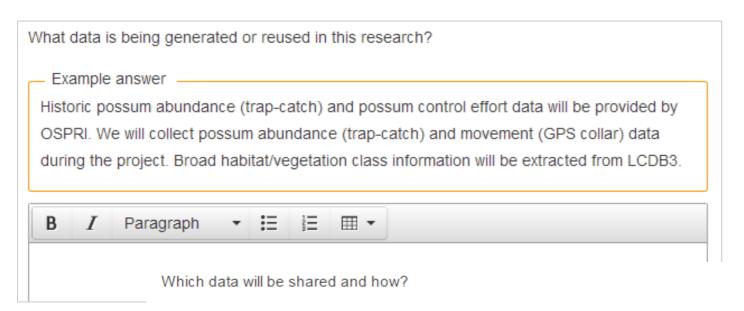
### Overview of customisation options

- Add your own template(s)
- Add questions to other templates
- Add custom guidance
- Add dropdowns options, examples, suggested answers...
- Brand the tool (coming soon)

## Organisations can add DMP template(s)



### Provide examples and suggested answers



Suggested answer

If you are able to make your data openly available and plan to use the <u>Edinburgh DataShare</u> service, you could say something along the lines of:

The University of Edinburgh undertakes to maintain the digital outputs of this project for the long-term and will utilise University infrastructure (namely the Edinburgh DataShare repository) to ensure continued access. Edinburgh DataShare is an online digital repository of multi-disciplinary research datasets produced at the University of Edinburgh, hosted by the Data Library in Information Services. A persistent identifier and suggested citation is provided for any dataset deposited.

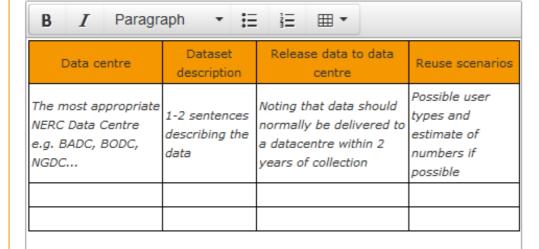
#### **Dropdown options and default styles**

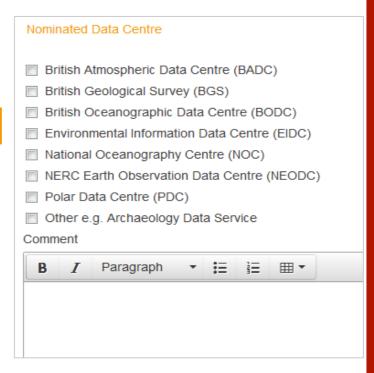
5. Ik ga bestaande data hergebruiken en ik heb toestemming van de data-eigenaar/eigenaren voor het gebruik van zijn/hun data.

- Ja
- De toestemming moet ik nog krijgen.
- Toestemming is niet nodig, omdat de data open beschikbaar zijn.

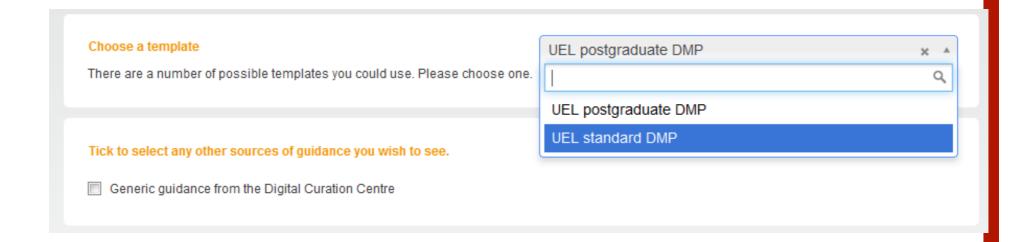
#### New datasets (1 question, 0 answered)

Datasets likely to be created by the grant or fellowship which will be made available to a NERC Environmental Data Centre at the end of the Grant



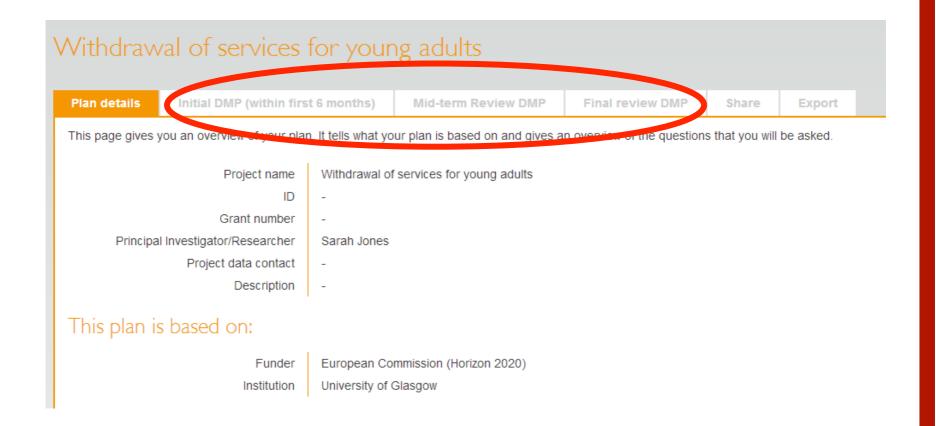


#### You can have more than one template



You may want to provide different templates for different audiences or different funding calls / programmes

### And templates can have multiple phases



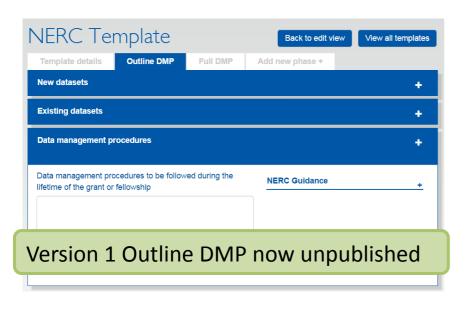
This encourages researchers to actively update the Data Management Plan throughout the project

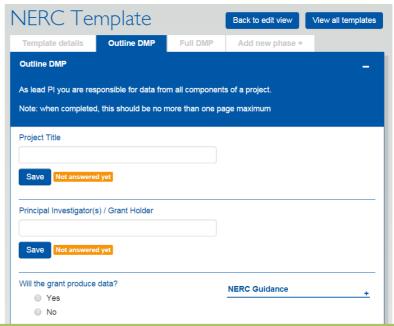
### Earlier versions of templates are retained

#### Versions

A first version is created automatically. If you want to make major changes to published versions later (e.g. add section or questions) please create a new version. If you only want to fix typos or make small changes that do not alter meanings, edit the current version.

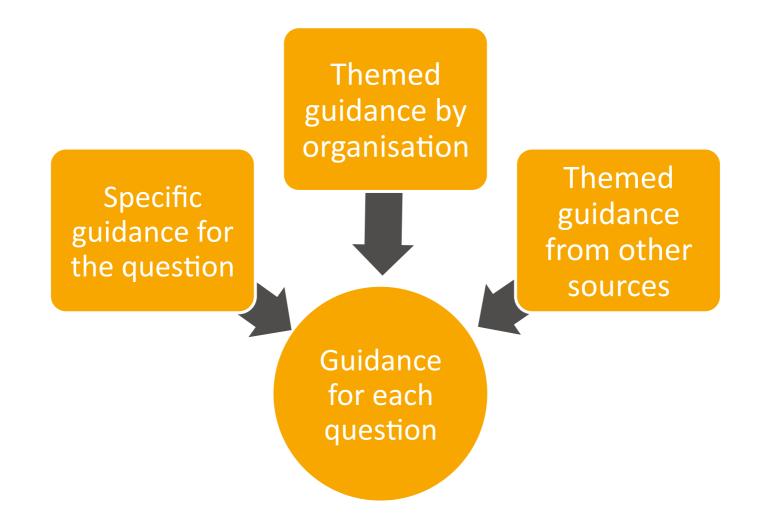
| Title                               | Published | Created at | Last updated | Actions           |
|-------------------------------------|-----------|------------|--------------|-------------------|
| Outline for application (Version 1) | false     | 16-09-2013 | 24-07-2014   | View Edit Preview |
| Outline for application (version 2) | true      | 30-05-2014 | 24-07-2014   | View Edit Preview |





Version 2 of the Outline DMP currently in use

#### **Guidance in DMPonline**



#### Themes used in the tool

- Existing Data
- Data Description
- Data Format
- Data Type
- Data Volumes
- Data Capture Methods
- Documentation
- Metadata
- Data Quality
- Ethical Issues
- IPR Ownership and Licensing
- Data Security
- Storage and Backup

- Expected Reuse
- Discovery by Users
- Method for Data Sharing
- Timeframe for Data Sharing
- Restrictions on Sharing
- Managed Access Procedures
- Data Selection
- Period of Preservation
- Preservation Plan
- Data Repository
- Responsibilities
- Resourcing

### Organisational guidance

# Guidance can be added by theme (to apply across the board) or can be written for specific questions

#### Themed guidance

#### Glasgow guidance on Storage and Backup

During a project data should be stored on backed up University servers or other suitably backed up services. If you need advice you can contact your local IT Support for advice or email openaccess@glasgow.ac.uk.

Guidance that is presented whenever researchers are asked about storage and backup

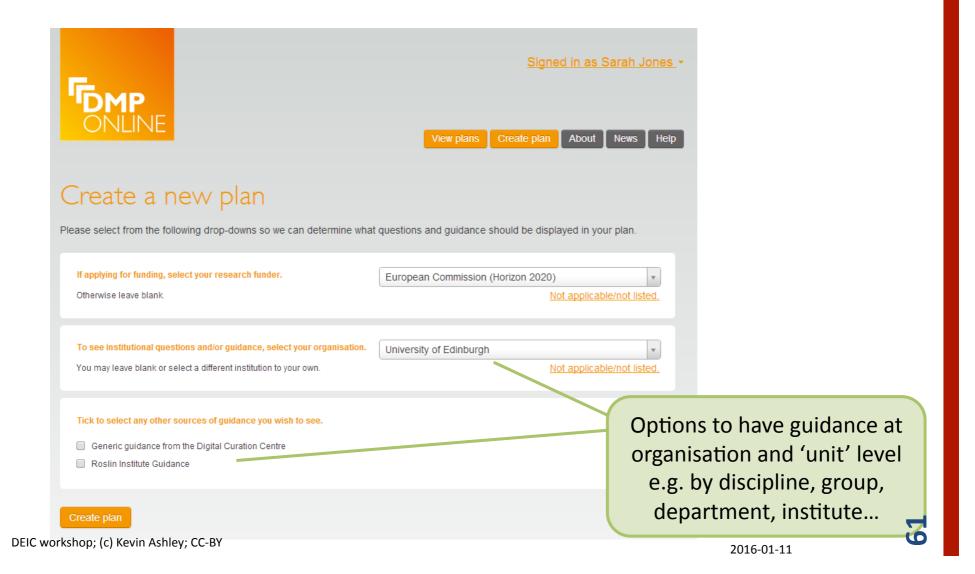
#### Specific guidance

#### Glasgow guidance

The University provides a <u>template answer</u> for this MRC question which includes links to relevant policies.

Guidance that pertains to MRC question 7 only

### Guidance can be set at multiple levels

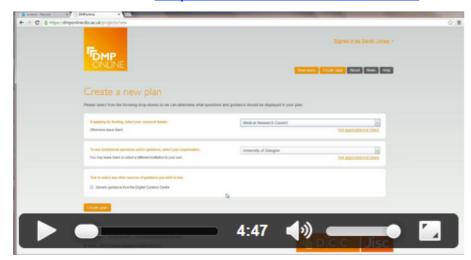




#### **More information**

Screencast on how to use DMPonline

http://www.screenr.com/PJHN



Customising DMPonline www.dcc.ac.uk/news/customising-dmponline-admin-interface-launches



DMP guidance, tools & resources:

www.dcc.ac.uk/resources/data-management-plans