

Data Management Plan Template

****To be completed by Data Centre with successful Grant Holders within 3 months of the Start Date of the Award (do NOT submit this form with Proposals)****

Project Information

Project Name	Glacier melt rates
Project Number (NERC PIs only)	
Grant Reference	NE/J001234/1
Principal Investigator	J. Smith

Organisation

Nominated Data Centre	UK Polar Data Centre
Data Centre Contact	K. Buckland
Project Data Contact	J. Smith
Please specify any other team members with responsibility for data	Co I Jones, project partner Davies, post doc (to be hired)

Roles and Responsibilities

The UK Polar Data Centre (PDC) together with the PI are responsible for ensuring compliance to the [NERC Data Policy](#), which includes the preservation of model code and model output. We will also be guided by the [UKRI open access policy](#). The PDC are the lead NERC designated Data Centre and will offer support to the PI for any queries they have regarding the policy and managing their data. The PDC can generate dataset DOIs and data will be made available via the PDC Discovery Metadata System: <https://data.bas.ac.uk/>.

PI Smith is responsible for ensuring that the data management plan is followed and that all data and accompanying metadata are submitted to the PDC by the end of the project for long-term curation. The PDC will hold the data under embargo up to two years from the end of data collection if requested – in line with NERC policy – to allow researchers to work-up their data sets and publish their findings. When released, data will be published under the [UK Open Government License](#) unless agreed otherwise.

Please be aware that some journals are now requiring DOIs to be issued to datasets before papers are published. As a result of this, should you wish to publish any papers in any such journal before the intended data delivery date, then the PDC will have to receive such data earlier so we can make it available and assign it a DOI.

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Data Generation Activities

Short description of the project –

- *What data will be produced and using what methodology/instruments*
- *What volume of data will be produced*
- *The timescale of when capturing the data will start, when it will be processed, when it will be finished and when it will be transferred to the PDC.*

The aim of the project is to calculate the glacier melt rates using borehole CTD sensors. There will be 5 boreholes drilled and measurements will be taken in the 2020 and 2021 seasons. This dataset will be in the region of GBs.

There will be a later modelling element to the project, producing several TBs of netcdf. Where possible, the model code will be developed in an open source environment, governed by a source code management tool such as GIT and made available in non proprietary format for storage e.g. ASCII. Model configuration files and input or forcing data will be preserved in standard formats (e.g. netCDF) in a versioned repository e.g. GIT.

Model code and the associated input or output data that are used to generate scientific publications or perceived to have a high value to the wider scientific community, will be provided to and managed by the PDC. An estimate of the total model data volume suitable for archiving shall be made based on the subsetting that does not affect underlying scientific principles. (*Note: If licensing constraints exist these can be discussed. Where source code is unavailable or is not able to be shared because of licensing constraints it is essential that the documentation describes what software systems and what version of those were used to create the data.*)

In-Project Data Management Approach

Throughout the project data (where they are in electronic format) will be backed up on secure systems so that hardware failure and/or malicious attack on the data and/or systems will not cause a permanent loss. In-project data storage (i.e. file directory structure, file naming, raw and processed data use constraints) and in-project data sharing (i.e. who will have access to raw and/or processed data whilst data are still being collated and analysed and how will it be shared safely) will be agreed as early in the project as possible to avoid issues arising later in the project.

The data of long term value will be transferred to the PDC before the end of the project in an open format (see the PDC's format guidance [here](#)), most likely over email or internet. The PDC will store these data in its secure electronic archive, which is regularly backed up.

Metadata and Documentation

While measurements are being made, the necessary metadata to enable their use and re-use will be recorded to the best of the scientist's abilities and should document what, where, when, how, why and who generated the data (including analysis and processing steps). The PDC's metadata guidance and metadata template (to be used when submitting data) is available here: <https://www.bas.ac.uk/data/uk-pdc/metadata-guidance/>. Metadata for NetCDF files should comply with the Climate Forecasting (CF)

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convention as far as possible. Metadata for model data should include what model, input data, and any pre- or post-processing software was used along with version information. It includes the date when the model output data were created and the persons and institutes responsible for running the model.

Metadata and any associated documentation will be submitted at the same time as the accompanying datasets. Metadata will be made accessible through the PDC's Discovery Metadata System (<https://data.bas.ac.uk/>), the NERC Data Catalogue Service and the Antarctic Master Directory.

If there are any specific metadata requirements for this grant they should be described.

Data Quality

It is expected that data being supplied by the PIs will have been suitably quality checked.

All data analysis will be carried out using nationally or internationally recognised methodologies, where possible. The researcher will ensure that the methodology is documented, and monitor and maintain procedural and analytical reproducibility using replicates and standards where possible. Any corrections or processing of data must be documented.

The PDC will perform their own quality assurance checks on the data and metadata to ensure everything is in order. The PDC's checklist is available to view here <https://www.bas.ac.uk/pdc-data-quality-checklist>.

If there are any QA practises specific to this grant they should be described.

Exceptions or Additional Services

Any exceptional expectations of Data Centres (for example exceptional volume of data or complexity) - funding for which should be included within the project's Directly Incurred costs and explained within the Justification of Resources attachment;

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Authors	K. Buckland. J. Smith
Created Date	01/10/2020
Last revision date	01/10/2020
Version Number	Draft
Approved by PI/PM	

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Approved by (Data Centre)

Data Owner / IPR

NERC, OGL v3

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Datasets

New Datasets

Digital Information

Enter a brief description of the activities that will produce the data

Dataset Description	Contact	Data Volume	Data Format	Issues	Delivery Date	Embargo Date	Preservation Plan
<i>Dataset description</i>	<i>Dataset contact name</i>			<i>Any issues with the data, .e.g. legal, access, ethics etc</i>	<i>Date expect to receive data</i>	<i>No more than 2 years after collection</i>	<i>e.g. Keep indefinitely, Do not keep etc, including destination data centre (if not owning DC)</i>
Borehole CTD data	PI	In the order of GBs	CSV	N/A	Towards the end of 2021	2 years from collection (2023)	Keep indefinitely at the UK Polar Data Centre
Model data	PI	Several TBs	Netcdf and ASCII	N/A	Sep 2022	2 years from collection (2024)	Keep representative subset along with any data used in publications at the UK Polar Data Centre

Hardcopy Records

Enter a brief description of the activities that will produce the data

Dataset Name	Contact	Data Volume	Data Format	Issues	Delivery Date	Preservation Plan
<i>Name of dataset</i>	<i>Dataset contact name</i>			<i>Any issues with the data, .e.g. legal, access, retention etc</i>	<i>Date expect to receive data</i>	<i>e.g. Keep indefinitely, Do not keep etc</i>
None						

Physical Collections & Samples

Enter a brief description of the activities that will produce the data

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Dataset Name	Contact	Data Volume	Issues	Delivery Date	Preservation Plan
<i>Name and description of dataset</i>	<i>Dataset contact name</i>		<i>Any issues with the data, .e.g. legal, access, retention etc</i>	<i>Date expect to receive data</i>	<i>e.g. Keep indefinitely, Do not keep etc</i>
None					

Third Party/Existing Datasets

Dataset Name	Contact	Location	Contents	Estimated Size	Responsibility	Licence Issues	Comments
<i>Name of dataset</i>	<i>Name of contact for dataset</i>	<i>Where is it stored</i>	<i>Brief Description</i>		<i>Who is responsible for sourcing the dataset</i>		<i>Any additional information (e.g. licence or use restrictions?)</i>
None							