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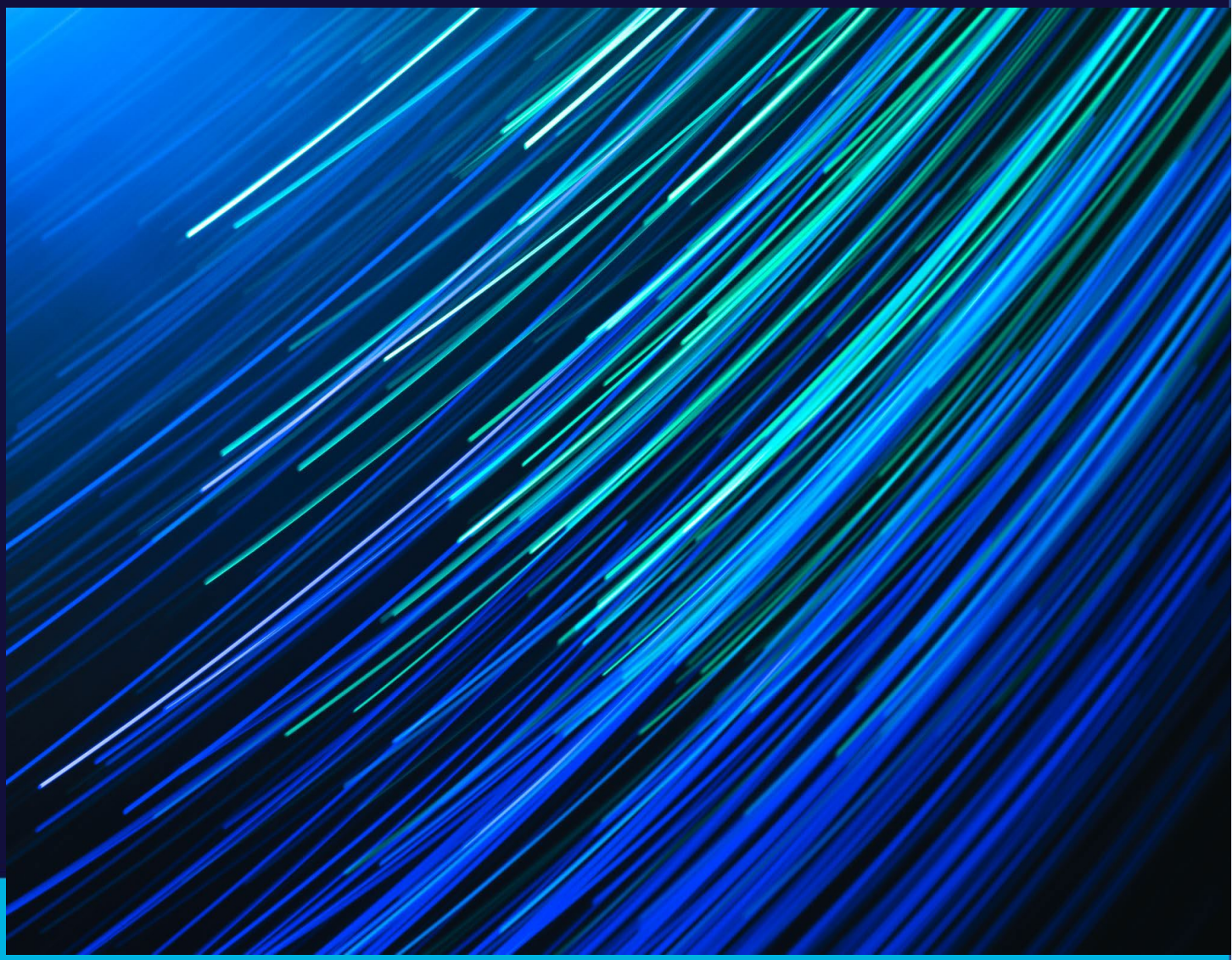
Ulster University Research Data Management Policy



Revised and updated June 2024
Final v2.0

Research and Innovation

Ulster University

1. Introduction and Purpose

1.1 Ulster University places high value on research conducted under its auspices and is committed to excellence in managing data generated from research activities across the university.

1.2. Excellence in research data management (RDM) furthers Ulster's strategic commitments (see People, Place and Partnership Strategy in appendices). It supports the development of next generation research leaders, fosters an outstanding research environment and strengthens research partnerships by:

- **Ensuring research integrity and validation of research results**: good RDM practice fulfils the commitment of responsible research by making it repeatable, reproducible, replicable and reusable.
- **Demonstrating accountability**: good RDM demonstrates Ulster's desire to create high-quality research outputs from the use of the public resources that fund it.
- **Increasing the impact of research**: good RDM gives Ulster research greater visibility and increases citations.
- **Making research accessible and easier to share**: good RDM makes Ulster research easier to re-use, acknowledge, provide feedback on and build new research partnerships upon. The FAIR Data Principles are intrinsic to these objectives and are outlined in Section 8.1.

1.3 To this end, the University's Research Data Management (RDM) Policy aims to:

- Foster responsibility for research data management through the promotion of best practice.
- Ensure that those involved in the research process are aware of their data-related responsibilities.
- Promote open access to research data produced at Ulster University in order to facilitate data discovery, citation, sharing and collaboration.
- Enable the University to meet its obligations with regard to research data management as defined by research funders and in compliance with relevant legislation and regulations.

2. Policy Scope and Definitions

2.1 This policy applies to all members of the University conducting research or involved in the creation, collection, processing, control or generation of research data. This shall include, but not be limited to, employed staff, research students, honorary staff and visiting academics and those acting as Data Owners, Data Processors and Data Controllers. This group will be collectively referred to as "Researchers".

2.2 References to the "Principal Investigator (PI)" in this policy mean the University employee primarily tasked with delivering a programme of research

on behalf of the University, whether or not they are referred to as such in a research grant.

2.3 This policy applies to research data in all its forms irrespective of whether or not the research is funded. This means information in digital, or physical format, and may include raw data captured from instruments, derived data, documents, spreadsheets and databases, lab notebooks, visualisations, models, software, images, audio or visual recordings, journal entries or other documentation of research practice. The Concordat on Open Research Data definition of research data can be found in Appendix 1.

2.4 References to "Repository" refer to data repositories which are tools for sharing and preserving research data. Data repositories are often divided into three categories:

- Institutional Repositories (IRs) are affiliated with a researcher's institution. Faculty, staff, and students at Ulster University can use PURE.

- General-purpose or Open Repositories (ORs) allow researchers to deposit and make their data available regardless of disciplinary or institutional affiliation. OpenDOAR is the quality-assured, global Directory of Open Access Repositories. It hosts repositories that provide free, open access to academic outputs and resources.

- Disciplinary Repositories (DRs) also known as subject repositories, are discipline-specific and often operated by a professional organisation, a consortium of researchers, or a similar group. An example is the UK Data Archive repository.

2.5 This policy applies to all approved research projects conducted at the University by Researchers regardless of whether they are externally funded or not.

2.6 This policy should be read in conjunction with all related policies and guidance documents (see Appendix 2).

3. Ownership of research data and IPR

3.1 Intellectual property rights (IPR) are subject to the University's Intellectual Property Policy. IPR might also be defined through further agreements e.g. grants, consortium agreements, or commercial agreements. Queries regarding IPR should be directed to the University Intellectual Property Manager.

3.2 Where no external agreement exists the University has ownership of research data generated in the course of research undertaken by researchers in its

employment. All research data remains within the University if the researcher leaves the institution.

3.3 Ownership or exclusive rights to host, reuse or publish research data should not be granted to commercial publishers, agents or others without retaining the rights to make the data openly available for re-use, unless this is a condition of funding.

4. Planning research data management

4.1 All new research proposals [from date of adoption] must include research data management plans (or DMPs) that explicitly address data capture, processing, control, ownership, storage, security, integrity, confidentiality, retention, sharing and publication. Guidance on creating a DMP is available on the University's Research Data Management website.

4.2 The legislative requirements of UK GDPR/the Data Protection Act 2018 must be carefully adhered to in the data management planning stages of research proposals which involve collecting human data. These requirements include developing a Data Protection Impact Assessment (DPIA), Privacy Notice and Informed Consent. A Privacy Notice template is available from gdpr@ulster.ac.uk to assist this process. The Data Protection and Information Compliance Unit at Ulster have developed a Data Protection SharePoint site with FAQs, tips and guidance on Data Protection.

4.3 It is expected that the DMP for a research project is regularly reviewed and updated accordingly over the life of the project. Updated DMPs should be clearly versioned.

4.4 The storage, management and sharing of research data carries a cost, particularly if there is a need for long-term curation and dissemination, requiring the provision of staff and system resources. Costs for data management and sharing activities should be written into research grant applications, unless explicitly forbidden by the funder. Ulster's Research Data Management website gives guidance on costing Research Data Management. A member of the Research Development Team may be contacted for help costing Research Data Management.

4.5 Where a project involves external collaborators, the lead organisation is responsible for putting appropriate formal agreements in place covering data sharing and the contributions and rights of the various organisations and individuals involved. All such agreements should be reviewed and approved by the University before the project begins and should be sent to gdpr@ulster.ac.uk, the University Intellectual Property Manager and to the respective Faculty Research Contract Manager. In cases where the project is led by an external partner there is still a requirement for data generated or shared by Ulster University to be managed by a named individual with the University, usually the Lead Researcher at Ulster.

Personal/sensitive research data

4.6 In line with Open Research practices and funder requirements, research projects should explore the range of possibilities for ethically sharing research data before any data collection begins, seeking expert advice from funders, the Chair of the relevant university ethics committee and/or Research Governance or University GDPR, where appropriate. PURE Support can provide advice on options for restricted data sharing within Ulster University's Research Portal (i.e. PURE). The University recognises that in some circumstances, controls and limits on sharing are necessary. The guiding principle for researchers' should be "as open as possible, as closed as necessary".

4.7 If the data cannot be shared via a controlled or restricted process, it is the responsibility of the researcher to obtain agreement for not sharing research data with the funder at the start of the project.

4.8 When engaging with and recruiting research participants to a study, the researcher should use information sheets, consent forms and a Privacy Notice which make clear reference to data sharing, and which do not unnecessarily place restrictions on future use. These should be reviewed by the relevant ethics committee and should take into account data protection requirements. Privacy Notices must be submitted to gdpr@ulster.ac.uk

4.9 Research that will involve the collection, processing and possible sharing of personal and/or special category data must have a Data Protection Impact Assessment completed.

5. Storage and Management of Active Research Data

5.1 Active research data refers to research data that is currently being used, or is planned to be used in the near future.

5.2 All researchers must ensure that all active research data in digital and computer-readable form is stored securely in a durable format appropriate for the type of research data in question and is backed up regularly in accordance with best practice in the relevant field of research.

5.3 Suitable options for storage are Faculty/School storage systems that are managed, secured, encrypted, supported, operationally controlled, and securely maintained, where access is managed through strong and appropriate levels of secure authentication, good cyber hygiene and identity access management. Data must not be stored on unmanaged or external devices, including hard drives, USB sticks, or local storage that is not backed-up or encrypted, or third-party storage such as non-approved cloud storage platforms, such as Dropbox or Google Drive.

5.4 Throughout the project, sufficient metadata and documentation should be maintained to allow the data to be retrieved and understood. Further guidance on the types of metadata that should be maintained for research data is available on Ulster's RDM webpage 'Looking after your data during your research project'.

5.5 Non-digital research data unsuitable for digitisation but which is significant should be stored securely and labelled, indexed or categorised appropriately in order to identify the research data in question and support effective reuse of research data where this is appropriate.

6. Retention of Completed Research Data

6.1 Completed research data refers to data that needs to be preserved in a particular state as it is deemed valuable and worth retaining for reuse or to authenticate findings.

6.2 Researchers should assess which research data to retain at the end of a project and preserve in the long term. Guidance on how to determine which data should be archived can be found on the archiving and sharing completed data webpage from Ulster's Research Data Management website.

6.3 Research data must be retained for a period of at least 10 years from the date of any publication which is underpinned by the data or from public release. Where specific regulations with regard to data retention apply, e.g. from funders, these regulations should prevail, particularly where the required retention period is longer than the University requires.

6.4 Appropriate safeguards must be in place to protect any personal data retained as necessary to achieve the research objectives contained within it.

6.5 Researchers should have a clear plan for stewardship of research data during the retention period, for example if they leave the University, and for secure disposal.

6.6 All retained research data of potential current or future interest, or that which substantiates published research findings, should be assessed for open access feasibility. Researchers should be aware that some Research Funders (e.g. UKRI, Horizon Europe and Wellcome Trust) mandate open access to research data. Researchers must check if the Research funder has an Open Access Policy with a requirement related to open data.

Data which is retained but remains unpublished/not publicly accessible

6.7 Data which must be preserved but cannot be shared via a certified or trusted data repository (see section 2.4) should be retained on suitable University

provided systems. Suitable storage options are those outlined in section 5.3.

6.8 All retained research data should have a corresponding Dataset Record created in PURE to show that the data exists. This requirement allows the University to hold a central record of datasets stored across its storage systems. It is in alignment with FAIR principles (Findable, Accessible, Interoperable, Reusable), that research data should be discoverable even when the data is not publicly available. Researchers can create a Dataset Record by completing five minimum mandatory metadata fields (see Appendix 3). Support on creating a Dataset record is available in the guide Using PURE for Datasets and by emailing pure-support@ulster.ac.uk.

6.9 Research data that is not required for long-term preservation need not be retained beyond the end of the research project. Non-significant data could include early research notes, early versions of later documents or material which is expensive to store but quick and easy to collect again.

7. Disposal and Destruction

7.1 The disposal and destruction of research data must be undertaken in accordance with the university's recommended practices as outlined in the Records, Retention and Disposal Schedule (see Appendix 2).

7.2 The agreed processes for the timing, manner and recording of research data disposal and destruction should be included in data planning and stored with other project information and documentation.

8. Providing access to and sharing Research Data

8.1 Ulster University is committed to ensuring the research conducted within the institution is “as open as possible as early as possible”, and therefore supports its staff and students in making their research data openly available according to the FAIR Data Principles (Findable, Accessible, Interoperable, Reusable) standards and as articulated in the University’s Open Research Position Statement.

8.2 Research data should be made available for access and use in a timely manner.

8.3 Researchers must adhere to contractual, legislative, regulatory, ethical or funding obligations when providing access to research data.

8.4 To enable open access to research data the data should be deposited in a data service or certified (or trusted) disciplinary or publisher-specific data repository, or the University’s PURE certified institutional data repository as appropriate (see 2.4 for an outline of different repository types). At all times, researchers must use a certified or trusted digital repository. A certified or

trusted digital repository is one which will provide reliable, long-term access to managed digital resources. Re3data.org may be used to search for data repositories in general and certified repositories are identified. Support on depositing data in PURE is available in the guide Using PURE for Datasets and by emailing pure-support@ulster.ac.uk.

8.5 Where necessary, appropriate safeguards should be put in place to protect participants and ensure that access conditions are met (e.g. Anonymisation, access passwords) in compliance with Ulster University's guidance on good research practice.

8.6 Researchers should use their ORCiD to support the FAIRness of their research data outputs. Dataset records created in PURE will automatically be linked to a researchers ORCiD. Researchers should therefore ensure that their ORCiD is integrated with their PURE profile. Background information and a user-guide for integration is available on the PURE Support website.

8.7 Researchers who create websites to gather, process or disseminate research data should plan to preserve the website at the end of the research project. The UK Web Archive is an example of a reliable web archiving service supported by all UK legal deposit libraries. Researchers can request a research website be preserved using the Save a UK Website nomination form. Researchers must archive all research data from a research project website either in PURE or in a suitable external research data repository.

8.8 Any research data which is retained or hosted outside the University (e.g. in an external repository which is subject/journal or publisher specific) must be registered with the University. This requirement allows the University to hold a central record of datasets deposited in external repositories. Registering your dataset with the University is achieved by creating a Dataset Record in PURE. Researchers can create a Dataset Record by completing five minimum mandatory metadata fields (see Appendix 3) and adding the DOI of the externally hosted dataset. Support on creating a PURE Dataset Record is available in the guide Using PURE for Datasets. Alternatively, the DOI of the externally hosted dataset may be sent to the PURE support team who will create the PURE Dataset Record on the researchers' behalf.

8.9 The PURE support team will search for published research data as opportunities arise. On these occasions a Dataset Record will be created in PURE which points to the published data. PURE will alert staff members that a Dataset Record has been created.

8.10 Where relevant and feasible, documentation to support research data should be made available alongside the dataset; this may include blank consent forms, template surveys and questionnaires, codebooks, and information on data processing.

8.11 Where specific software or algorithms have been produced as part of the research, and are necessary to interpret the data, these must be made available alongside the dataset.

8.12 When a dataset is published in a data service or data repository, the data owner is encouraged to select an appropriate open licence under which their data will be made available. Researchers should be aware that some funders (e.g. Horizon Europe, see page 107 of the General Model Grant Agreement v1.2) mandate that a CC BY licence be applied to data. The data owner will need to ensure that the licence permits sharing and re-use of data in accordance with funder requirements and the terms and conditions of this policy.

8.13 Data are legitimate, citeable products of research, just as other research outputs. Data citation promotes the reproduction of research results, and makes it easier to find data. Researchers must ensure that research data used during the research process are properly cited in research publications, including conference papers, journal articles and other research outputs. If a researcher uses data from a repository that has been released under an open licence, they are obliged to cite it (even under a CC0 license) and should do so with a full citation. See the Research Data Management webpage for a link to specific guidelines for data citation.

8.14 Journal publications that report on publicly funded research must include a Data Access Statement (sometimes called Data Availability Statement) that indicates how research data may be accessed and any associated conditions. If no new data were created, the Data Access Statement should indicate this. A persistent identifier, such as a Digital Object Identifier (DOI) should be included when one is available. Researchers should be aware that some funders mandate the inclusion of a Data Access Statement for in-scope research articles. The purpose of the Data Access Statement is transparency and discoverability; the data referenced by the statement do not have to be openly available. Guidance on what to include in a Data Access Statement, as well as some example Data Access Statements can be found on the archiving and sharing completed data webpage from Ulster's Research Data Management website.

9 Responsibilities

9.1 The **Pro Vice-Chancellor for Research** is responsible for overseeing and ensuring the implementation of this policy.

9.2 The **University, through the Department for Research & Innovation**, is responsible for:

- Developing infrastructure and training to promote best practice in data management amongst its researchers;
- Supporting researchers to plan for data management and write data management plans for grant applications;
- Managing a dedicated website providing guidance for the University's researchers in good data management practice, including data deposition and related metadata description, and good data governance in compliance with relevant legal and ethical obligations;
- Maintaining an institutional metadata catalogue of research

datasets for publicly funded research in line with funder requirements;
- Providing Digital Object Indicators (DOIs) for datasets deposited at the University as per university DOI guidance.

9.3 **Associate Deans (Research & Innovation) and Research Directors** are responsible for promoting good practice in all aspects of research governance and integrity including Research Data Management. They should ensure that staff and students are aware of their responsibilities and obligations in effective management of research data and identify or promote training where gaps in these skills are identified.

9.4 Responsibility for research data management through a robust research data management plan during any research project or programme lies primarily with **Principal Investigators (PIs)**. In addition to requirements for researchers outlined below, **PIs** should:

- Include in research grant proposals appropriate consideration of the cost and time implication of data storage and management;
- Develop and record appropriate procedures and processes for collection, storage, usage (including any re-uses), access, and retention of the research data associated with their research programme;
- Ensure where research is conducted in collaboration with external research partners that suitable agreements for the ownership and use of research data are prepared following advice on the University's potential legal liability and agreed in writing by the parties concerned before the project starts. Help and guidance is available from Intellectual Property Manager, Research & Impact;
- Define the requirements for the selection of significant research data to be retained at the conclusion of the research project;
- Plan for the ongoing custodial responsibilities for the research data at the conclusion of the research project or on departure from the University;
- Ensure that a metadata record of retained research datasets is created in Ulster's PURE repository.

9.5 The University believes that embedding good Research Data Management practice in **early career researchers** is critical to establishing an effective data management ethos. Good research practice requires research students and their supervisors to plan the collection, storage, security and use of research data, in accordance with conventions in their fields of study and obligations from their funder, sponsors and the University. In addition to the requirements for researchers set out below, **PhD Researchers in consultation with their supervisors** should:

- Establish collection and storage procedures for their research data, and ensure that data management is planned and documented at the outset of the research project in accordance with their obligations as defined by the relevant funding bodies or sponsors and the University's policies.
- Ensure that a Data Management Plan is completed before the first

progression review, and regularly reviewed thereafter.

- Ensure that completed research data deemed significant to be retained is deposited in Ulster's PURE data repository on completion of the research.

9.6 All **Researchers** are responsible for making themselves familiar with this RDM policy and adhering to legislation, contractual and data management obligations, ethical considerations, funder policies, and FAIR data standards governing their research data and records management. Researchers should manage research data and records to ensure they are:

- Accurate, complete, authentic and reliable.
- Identifiable and retrievable.
- Secure and safe.
- Backed-up regularly in accordance with best practice in the relevant field of research.
- Kept in a manner that is compliant with legal, commercial and ethical obligations and, where applicable, the requirements of funding bodies and project-specific protocols approved under University policy.
- Registered within the University by creating a PURE Dataset Record to show that the data exists.
- Openly available in line with appropriate ethical, data sharing and open access principles.

10. Future revision of policy

This policy is to be reviewed annually and where necessary updated, to take into account any developments within Research Data Management during that period of time. Minor interim changes which do not change the meaning of the policy will be handled by the operational owner. Major changes, i.e. anything that alters the meaning of the policy or are substantial, will be submitted via the full approval route.

11. Contacts

Questions related to the Research Data Management Policy should be directed to pure-support@ulster.ac.uk.

Go to the Research Data Management website for more information and resources including support materials and training on using PURE for Research Data Management.

12. Document Control

Version Number	Purpose/change	Author	Date
Draft v0.1	New RDM Policy	Loraine Hanna	04/01/2018
Draft v0.2	This is the second version of the draft amended by line manager	Natalie Dallat	27/04/2018
Draft v0.3	This is the version of the draft available online.	Loraine Hanna Natalie Dallat	04/06/2018
Draftv1.0	Major revision and update of the policy.	Loraine Hanna	26/10/2022
Draft v1.1	Amended version of draft v1.0 by Head of Research Governance.	Nick Curry	28/11/2022
Draft v1.2	Amended version of draft v1.1 by Chief Digital and Information Officer.	Mark Taglietti	24/05/2023
Draft v1.3	Amended version of draft v1.2 by Data Protection & Information Compliance Manager.	Eoin Coyle	30/05/2023
Final v1.4	Senate approved draft v1.3	-	06/2023
Draft v2.0	Revised and updated draft v.1.3 by Open Research Officer and Research Assistant, Research Performance	Loraine Hanna Cathal Coyle	12/06/2024
Final v2.0	Senate approved draft v2.0	-	24/06/2024

Appendix 1

The Concordat on Open Research Data (2016) Definition of research data and open research data

Research data are the evidence that underpins the answer to the research question, and can be used to validate findings regardless of its form (e.g. print, digital, or physical). These might be quantitative information or qualitative statements collected by researchers in the course of their work by experimentation, observation, modelling, interview or other methods, or information derived from existing evidence. Data may be raw or primary (e.g. direct from measurement or collection) or derived from primary data for subsequent analysis or interpretation (e.g. cleaned up or as an extract from a larger data set), or derived from existing sources where the rights may be held by others. Data may be defined as 'relational' or 'functional' components of research, thus signalling that their identification and value lies in whether and how researchers use them as evidence for claims.

They may include, for example, statistics, collections of digital images, sound recordings, transcripts of interviews, survey data and fieldwork observations with appropriate annotations, an interpretation, an artwork, archives, found objects, published texts or a manuscript.

The primary purpose of research data is to provide the information necessary to support or validate a research project's observations, findings or outputs.

Open research data are those research data that can be freely accessed, used, modified, and shared, provided that there is appropriate acknowledgement if required.

Appendix 2

List of relevant policies

Ulster University strategic commitments

- UU People, Place and Partnership Strategy

Ulster University R&I Research Strategy

- R&I research strategy

Research Governance Policies

- Code of Practice for Professional Integrity in the conduct of research
- Intellectual Property Policy
- Policy for the Governance of Research involving Human Participants
- Policy on Research using Human Tissue

UKRI Policy Framework on Research Data

- Policy Framework on Research Data

Records Retention and Disposal Schedule

- Records Retention and Disposal Schedule 2.6 (April 2021)

Appendix 3

PURE Metadata Fields

Metadata field	Description	Mandatory and Recommended fields.
Title	Enter a title for your dataset.	Mandatory
Description	Add some description about the dataset itself. A statement about the format of the data and a short overview of the variables contained in the data file. The description field should enable other researchers to understand the dataset record and be useful to assessing the relevance of the data files to their research.	Recommended
Date of data production	It is useful to complete this field so that other researchers can see if the time period of data production is relevant to their research.	Recommended
People	PURE will add your name automatically and the default role displayed is 'creator'. Add other internal colleagues 'Add person' – start typing their name and PURE will display them in the drop-down menu. External contributors can also be added using the 'Create external person' function.	Mandatory
Dataset managed by	This will be prepopulated with the organisational unit affiliated to the person that is creating the dataset record. This can be amended, however, by clicking on 'Change organisation'.	Mandatory
Publisher	If you have archived or published your data already in an external data repository, the publisher will be the external repository owner, e.g. UK Data Archive. If you want to publish your dataset in PURE, then the publisher will be Ulster University.	Mandatory
DOI	If you have archived or published your data already in an external data repository is it important that you add the existing DOI. If you are publishing your data in PURE, a DOI will be minted by a member of the PURE Support Team during the validation process.	Recommended
Electronic data	This relates to the datasets (files) themselves. If you are publishing your data in PURE this is where your data files will be uploaded. If the dataset is published externally, there is no need to add it in PURE, but you are required to add the DOI pointing to the external repository.	Recommended
Date made available	This is essentially the publication date of the datasets (files). Only the year of publication is mandatory but it is helpful to be more specific if you can.	Mandatory
Access contact details	It is useful to specify a contact person for queries related to the dataset record. This contact should be an internal member of staff and a person who was added in the people section.	Recommended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