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Summary/Description:	The purpose of this policy is to establish principles for effective management of the research data generated within the University and its dissemination, through sharing of this data where appropriate. The policy provides the link between research practice and the data it produces, the management and curation of research data, including legal criteria that need attention, sharing research data with others, and the responsibilities that stakeholders in the research process have to ensure success in working with research data.
Scope:	This policy applies to all research carried out at the University of Hull, including that conducted by both staff and students, funded externally or by the University (respecting where contracts with private funders may have specific requirements). The policy does not apply to data gathered through regular business and administrative activity of the University, although it is recognised that the principles and practice detailed in this and related documents may also be of benefit in ensuring effective management of data in those areas.
Collaborative provision:	Please state whether this document is applicable to the university's collaborative partners: <input type="checkbox"/> Mandatory <input checked="" type="checkbox"/> Not mandatory
Assessment: (where relevant)	<input checked="" type="checkbox"/> Equality Assessment <input checked="" type="checkbox"/> Legal
Consultation: (where relevant)	<input type="checkbox"/> Staff trade unions via HR <input type="checkbox"/> Students via Hull University Union <input type="checkbox"/> Any relevant external statutory bodies
Relevant legal frameworks:	Data Protection Act 2018 (incl. General Data Protection Regulation); Freedom of Information Act 2000; Copyright, Designs and Patents Act 1988
Related policies/documents:	University Research Strategy; Statement of Research Integrity; Code of Good Research Practice
Document location:	University website's Policies and Procedures page and Sharepoint site; Research Integrity and Governance website



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Research Data Management and Sharing Policy

Introduction

Background

1. The University of Hull is committed to the delivery of high-quality research. A key element of this delivery is the dissemination of the outputs from research to communicate the research findings to the widest possible audience and achieve a broad societal impact. This dissemination recognises that the outputs from research are valuable assets meriting curation to support ongoing access and a major component of the knowledge legacy generated by the University.
2. Whilst acknowledging the primary focus of attention on publications as outputs from research, the University also recognises the intrinsic value of data generated through research. Research data underpin the research process, and provide the core basis of the research analysis that feeds into publications and other dissemination activity.

Purpose

3. The purpose of this policy is to establish principles for effective management of the research data generated within the University and its dissemination, through sharing of this data where appropriate. The policy provides the link between research practice and the data it produces, the management and curation of research data, including legal criteria that need attention, sharing research data with others, and the responsibilities that stakeholders in the research process have to ensure success in working with research data.
4. This policy seeks to support adherence with funder and journal policies related to research data. It is recognised that these policies continue to evolve, and supporting guidance will be issued to meet changing requirements as needed.

Scope

5. This policy applies to all research carried out at the University of Hull, including that conducted by both staff and students, funded externally or by the University (respecting where contracts with private funders may have specific requirements). The policy does not apply to data gathered through regular business and administrative activity of the University, although it is recognised that the principles and practice detailed in this and related documents may also be of benefit in ensuring effective management of data in those areas.

Context

6. The policy has been developed in the context of external guidance within the research community. In particular, the policy is aligned to the following documents:
 - a. The FAIR Guiding Principles (2016), <https://www.nature.com/articles/sdata201618>
 - b. The UKRI Common Principles on Data Policy (2011), <https://www.ukri.org/funding/information-for-award-holders/data-policy/common-principles-on-data-policy/>
 - c. The Concordat on Open Research Data (2016), <https://www.ukri.org/funding/information-for-award-holders/data-policy/>

7. This policy sets out principles that apply across all areas of research. It is recognised that there will be disciplinary norms and differences in the definition and understanding of research data, and its management and sharing. Where there are specific disciplinary data management requirements, these should be acknowledged and accommodated within the research data management and sharing practice carried out.

Definitions

8. **Research data** – For the purposes of this policy, and acknowledging disciplinary differences in interpretation, research data refer to any material collected, observed, constructed, generated, or created for the purpose of research analysis, and on which research conclusions are based¹. The policy applies to data that are both digital and non-digital. The principles of the policy can be used to inform the management of research data created over time, but the policy itself applies to research data created from the date of implementation of this policy.
9. **Data management plan** – A data management plan (DMP) is a document that records plans and actions undertaken to gather, store, manage, disseminate and preserve research data. A DMP acts as a methodology for working with data through a research process, and as a checklist to ensure the maintenance and development of good practice over time.
10. **Data curation** – Data curation involves the active management of research data to maintain, preserve and add value to the data throughout its lifetime.
11. **Data catalogue** – A data catalogue is a record of the existence of datasets, with each being described using a brief metadata record.
12. **Data repository** – A data repository is a location or service that can be used to hold, curate and share research data over time. Its focus is on holding final datasets that are being managed after the research generating the data has been completed.
13. **Data sharing** – Data sharing in the context of this policy involves making research data available for others to make use of. This might range from use of a data repository where others can simply download the data through to communicating contact details to agree on a suitable means for providing access. A key part of sharing data is the creation of suitable metadata or data documentation describing the data to facilitate access and understanding about the data.

Principles

Research practice

The University requires and fosters the practice of research to high standards across all disciplines, and has laid out its expectations in the Statement on Research Integrity (2015). The effective management of research data contributes to research integrity by ensuring that the analysis disseminated through research outputs has a sound basis. The University also promotes a culture of honesty and accuracy in research practice, and in the management of research data as part of this.

Good research data management contributes toward research reproducibility by facilitating transparency in research practice.

¹ Research data types include, but may not be limited to: documents, spreadsheets, laboratory notebooks, field notebooks, diaries, questionnaires, transcripts, codebooks, audiotapes, videotapes, photographs, films, test responses, slides, artefacts, specimens, samples, collections of digital outputs, data files, database contents (video, audio, text, images), models, algorithms, scripts, contents of an application (input, output, logfiles for analysis software, simulation software, schemas), methodologies and workflows, and standard operating procedures and protocols.

14. Where research data contains personal or sensitive information, the management of the data must be included in the ethical approval for the research.
15. Managing research data is a key researcher skill alongside other research skills (See Principle #9 in the Concordat on Open Research Data): the University will provide training to enable researchers to develop this skill and put it into practice.
16. Research induction and continuing researcher professional development must include reference to research data management and this policy so staff and students are aware of the requirements upon them.

Managing data

The management of research data is a task carried out by all researchers to some degree. This policy highlights the benefits of a structured approach to that task.

17. A vital element of the management process is the development of a data management plan (DMP). All research projects must create a DMP as part of their documentation for the project and this must be stored alongside the research data so it can be referenced as part of the management process for that research.
18. The amount of research data being generated will vary from project to project. In each case researchers must at an early stage assess the scale of the data and make suitable arrangements for it to be stored and backed up. Where ICT storage services will be used, early communication with ICT must be undertaken to inform appropriate practice based on requirements.
19. Research planning should account for the costs associated with managing data. Where funders can provide support for such costs, or a proportion of them, this should be included in grant applications.
20. Research data should be managed in keeping with best current practice for data curation, acknowledging disciplinary norms as part of this. This must include assignment of a DOI to datasets for clear identification.
21. All research data to be stored by the University must have an associated curation plan (as part of the DMP). This must include a date of expiry for the data, which, unless there are specific funder requirements otherwise, must not exceed five years from the date of deposit. All data reaching their expiry date or the five-year limit must be reviewed by the researchers, their line manager and Department Research Director in collaboration with ICT and the Library to inform future management, or agree on deletion of the data.
22. All completed research datasets generated by the University must have a brief metadata record created within the research information system, providing a data catalogue; this will include data stored locally at the University and data stored at third party services externally. Where data is deleted, the record must be kept, but updated to record when the deletion took place.
23. Non-digital data will require specific management according to the type of data involved. The precise arrangements for such management must be incorporated within the DMP for the research in question.

Sharing data

24. In keeping with the value inherent in the dissemination of research outputs, sharing data openly is an aim for all research at the University. This policy recognises though that there are valid reasons why data cannot be shared, and these reasons must be recorded as part of

the data catalogue record. Decisions on sharing must take account of associated funder requirements.

25. Researchers involved in the creation of the data have the right to exploit the data for an agreed period prior to sharing it (see Principle #4 in the Concordat on Open Research Data and Point 5 in the UKRI Common Principles on Data Policy). Guidance from funders and/or subject communities should be followed on the length of such a period: where no such guidance is available a locally agreed time limit that takes account of disciplinary practice will be applied.
26. When data is being shared it must have an extended metadata record describing what the dataset contains to facilitate access and use. Additional data documentation should be provided where appropriate to facilitate transparency in communicating the detail of the research data.
27. Where research data is referenced in publications, a data availability statement must be included indicating whether the data is available or not, and how the data can be accessed if it is available. Research data referenced in publications must ordinarily be accessible at the point of publication.
28. Where research data is sourced externally and used within research at the University, it must be appropriately referenced as an acknowledged source. Research data generated at the University must be citeable by others: this must follow institutional guidance on citation and include the Digital Object Identifier (DOI) assigned to aid discovery.
29. Research data can be shared through an appropriate data repository, which may be local or via a third-party service. If the latter option is chosen, the service should adhere to the principles within this policy.

Legal

30. All data created through research at the University by employees is owned by the University, unless there are contractual arrangements that specify otherwise.
31. Researchers who leave the University must ensure that access to a copy of the data, whether at the University or at a third party, is available prior to leaving: details of such access must be recorded in the data curation plan for a dataset, which must be stored and made available alongside the data.
32. Students may own the data they generate, dependent on the source of their funding, but must clarify this and any shared ownership and authorship the University may claim with staff/supervisors at an early stage in the research process and record this within the DMP.
33. Where research data is shared, an appropriate licence should be applied to facilitate access and usage by others. Conversely, data sourced externally must be used in accordance with any licensing attached to this. Exclusive rights to reuse or publish research data must not be handed over to commercial publishers or agents.
34. Where research data is of a personal or sensitive nature, the data must be managed in accordance with the relevant specific policies related to such research, plus ensure that the data is managed in keeping with relevant legislation. In particular, data management must adhere to the General Data Protection Regulation and Freedom of Information Act (2000). It is acknowledged that legislative requirements may alter over time and that data management must take account of such changes as they occur.
35. Data must be held securely and used only for the purpose that has been consented.
36. Care must be taken over who has access to such data, and details of such access rights recorded in the DMP.

Responsibilities

Overall responsibility

The management of research data is a collaborative activity that involves multiple stakeholders across the University. It is recognised that only through working together can the University effectively achieve the principles outlined in this document.

37. Primary responsibility for the management and sharing of data lies with the Principal Investigator (PI) for the research being carried out. Details of how this responsibility is exercised must be recorded within the DMP. Where the PI leaves the University, responsibility should be delegated to an appropriate colleague: if no such delegation takes place responsibility for the data will be the responsibility of the PI's Department or Institute.

Heads of Department/Directors of Institute responsibilities

38. It is the responsibility of Heads of Department/Directors of Institutes to ensure good practice and legal obligations are met relating to the management and sharing of research data within their area.
39. Heads of Department/Directors of Institute should identify and implement any training or skills development required in carrying out the above responsibility.

Researcher responsibilities

40. Researchers are responsible for ensuring that research data they work with is managed, and shared where appropriate, in accordance with the principles set out in this policy.
41. Researchers must make every reasonable effort to keep an accurate and comprehensive record of their research and associated research data to demonstrate good practice and underpin adherence to the principles of this policy.
42. Researchers must ensure that research data management and sharing carried out under the aegis of collaborative projects, involving partners external to the University, is suitably documented to make clear the University's responsibilities during and beyond the project's lifetime.

Postgraduate research student and supervisor responsibilities

43. It is the responsibility of postgraduate research students and their supervisors to ensure that research data management is planned and documented at the outset of the research project to fully inform work with research data during and beyond the period of doctoral study.

University responsibilities

44. Supporting responsibilities lie mainly with three areas of the University: Research Funding Office, University Library, and ICT.
45. Research Funding Office is responsible for:
 - a. Advising on funder requirements for data management and sharing as part of grant applications.
 - b. Support in the development of DMPs for such grant applications.
 - c. Communication and coordination of effort to identify data management needs as part of research development.
46. University Library is responsible for:
 - a. The delivery of appropriate training on data management and sharing.
 - b. Support in the development of DMPs to support ongoing research.

- c. Provision of guidance and advice on the curation and preservation of research data.
 - d. Guidance and support on the creation of appropriate metadata for research data to support the data catalogue and sharing.
47. ICTD is responsible for
- a. Provision and support of appropriate systems, including storage, to meet the University's research data needs.
 - b. Management of contracts with external service suppliers where appropriate to help meet these research data needs.
 - c. Provision of costs for managing data for inclusion in grant applications.

Reporting

48. In keeping with Principle #10 of the Concordat on Open Research Data, review of this policy will take account of the annual assessment of the progress towards the provision of open data by researchers at the University.

Supporting documents

49. The following additional guidance documents expand and detail the procedures for how the principles in this policy are put into practice.
- a. Procedures for managing and disseminating research data (to be discipline-specific as appropriate).
 - b. Checklist for determining practice re: sharing data (accounting for legal issues).
 - c. Online guidance, support and training through the research data management libguide.
 - d. A data deposit licence to capture the terms under which data is stored by the University over time.
 - e. Data management and curation plan templates and guidelines to facilitate development of such plans.
 - f. A cost model for the curation and management of research data.