

# Managing Research Materials and Data: Recordkeeping Guidelines

## 1. Introduction

The principal Statute governing the creation, retention and disposal of records in Western Australia is the *State Records Act 2000*. A core requirement of this Act is the responsibility of organisations to ensure that records are created and kept that properly and adequately record the performance of the organisations' functions<sup>1</sup>.

A core function of the University as described in the *Murdoch University Act (1973-85)* is "to encourage and undertake research"<sup>2</sup>. As a research-based university with membership of the "Innovative Research Universities Group (IRUA)" it is essential that clear guidelines exist for researchers and administrators concerning the retention and proper management of research data and materials.

The *Australian Code for the Responsible Conduct of Research* describes best practice research for researchers and institutions<sup>3</sup>. The guidelines that follow address section 2 of the Code and set out the University's responsibilities concerning the management of research data and primary materials.

A commitment to the requirements of this Code will allow the University to comply with the obligations of its regulatory environment and to ensure the continued availability, use and sharing of research knowledge. The guidelines recognise that both researchers and the University have rights and responsibilities and accordingly they seek to clarify issues of ownership, storage and access to research data.

Adherence to these guidelines by researchers and administrators will have the following benefits:

- Facilitate compliance with legislative and regulatory requirements
- Prevent the premature disposal of research materials and data

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<sup>1</sup> State Records Commission Standard 2, Principle 1 "Proper and Adequate Records"

<sup>2</sup> Section 6(1)(c) of the *Murdoch University Act 1973-85*

<sup>3</sup> The Code was developed by the National Health & Medical Research Council (NHMRC) in partnership with the Australian Research Council and Universities Australia

- Assure the availability and accessibility of research materials and data for as long as they are needed to meet research and legislative requirements
- Safeguard the rights of the University and its researchers, particularly intellectual property considerations
- Enhance the University's reputation for sound governance and organisational accountability

## 2. Purpose

These guidelines have been prepared to provide direction and guidance to university staff about the management and disposal of research materials and data in accordance with the requirements of the *Australian Code for the Responsible Conduct of Research* and applicable legislative requirements, in particular the *State Records Act 2000*.

## 3. Scope

These guidelines apply to all academic staff, administrators and student researchers whose responsibilities include undertaking research and managing research data and materials at the Murdoch, Rockingham and Peel campuses, and at the University's Centres and Institutes. This includes permanent, temporary and part-time employees, contractors, visiting research fellows and research assistants.

All research data, primary materials and related records in all media and formats are covered by these guidelines.

## 4. Research and research data

**Research** is defined in the *Australian Code for the Responsible Conduct of Research* as that which: "... includes work of direct relevance to the needs of commerce, industry, and to the public and voluntary sectors; scholarship; the invention and generation of ideas, images, performances, artefacts including design, where these lead to new or substantially improved insights; and the use of existing knowledge in experimental development to produce new or substantially improved materials, devices, products and processes, including design and construction.

It excludes routine testing and routine analysis of materials, components and processes such as for the maintenance of national standards, as distinct from the development of new analytical

techniques. It also excludes the development of teaching materials that do not embody original research.”

**Research data** refers to recorded factual information commonly accepted in the scientific community as necessary to replicate and verify research results. It includes laboratory notebooks, field notes, primary research data in digital and hard copy format, questionnaires, interviews, transcripts, audio-visual tapes and recordings, models, photographs, and test results.

## 5. Primary research materials

The *Australian Code for the Responsible Conduct of Research* recognises the impracticality of keeping all primary material associated with a research project. This includes, for example, ore samples, tissue and biological samples, specimens, questionnaires and recordings. However, it is a requirement of the Code that all ‘durable’ records derived from them must be retained and kept accessible for the duration of the appropriate retention period.

The researcher is required to decide which data and materials should be retained, although in some cases this is determined by law, funding agency, publisher or by convention in the discipline. The guiding principle in deciding what must be kept is to ensure sufficient materials and data are retained that allow the outcomes of the research to be justified and defended if they were to be challenged or if allegations of misconduct were investigated. Any future value of the research material also needs to be considered particularly where the research would be difficult or impossible to repeat.

## 6. Responsibilities

The University’s responsibilities under sections 2.1-2.7 of the *Australian Code for the Responsible Conduct of Research (Responsibilities of Institutions)* can be summarised as follows:

- Storage of research data and primary materials
- Ownership of research data and materials
- Transfer of research data
- Access to research materials and data
- Confidentiality of research data and materials
- Retention of research data and primary materials

- Disposal of research data and primary materials

## 7. Storage of research materials and data

- (a) Wherever possible and appropriate, research data and primary research materials should be held in the Faculty/School of the chief investigator of a research project. Where arrangements are made to utilise a suitable storage repository elsewhere at the University these arrangements should be documented.
- (b) A storage repository, whether for hardcopy or electronic data, must allow data to be maintained securely and permit effective control over access and use. Lockable filing cabinets or storage areas with supervised access, and password protection for shared drives should be utilised.
- (c) Confidential research data must be stored securely to ensure that privacy issues and the University's contractual obligations of confidentiality contained in funding agreements are met.
- (d) Research data appraised as having long-term "archival" value has specific storage requirements. It includes any original research data with national or international significance and that makes a substantial contribution towards the professional body of knowledge and/or has commercial and intellectual property spin-off.

This research data must be managed according to State Records Commission's *Guideline 2: Storage of State Archives Retained by Government Agencies* and *Public Records Policy 8: Policy for the Ongoing Management of Electronic Records Designated as Having Archival Value*.

- (e) Attention must be given to storing research materials and data with long-term archival value in environmental conditions that will ensure they are preserved according to their format. Hardcopy research records must (eventually) be stored in environmental conditions that provide temperature and humidity control, and proper packaging and shelving arrangements.
- (f) The preservation of electronic data with long-term storage requirements will require the use of migration techniques to

ensure it remains accessible and usable for the duration of its retention requirements.

- (g) As custodians of research data and primary research materials the relevant Faculty/School should ensure that sufficient space and financial resources are allocated for the preservation and retention of research records generated from research projects. Researchers should be aware that some funding agencies may allow costs of data storage to be included as a budgeted item.
- (h) Where research projects include several institutions, an agreement should be developed at the outset covering the storage of research data and primary materials within each institution.
- (i) Researchers must keep clear and accurate records of the research methods and data sources, including any approvals granted, during and after the research process.
- (j) Researchers must ensure that research data and primary materials are kept in safe and secure storage even when not in current use.
- (k) Researchers must provide the same level of care and protection to primary research records as to the analysed research data.
- (l) Researchers must retain research data, including electronic data, in a durable, indexed and retrievable form.
- (m) A register should be kept in each Faculty that records details of where research data are stored.
- (n) Researchers should ensure that a back-up copy is always made of project research data.

## **8. Ownership of research materials and data**

- (a) Subject to any specific conditions specified in a written agreement or contract, ownership of research materials and data resulting from a research project hosted by the University resides with the University and not the researcher or funding body. In the case of collaborative research projects that involve outside parties there may be variations based, for example, on the financial contributions made by each party.

- (b) Where ownership of research data, intellectual property and commercialisation rights is owned by the sponsor - as sometimes occurs when research is industry or privately-funded - the researcher should ensure the right to use the research data for non-commercial internal research purposes is addressed.
- (c) Intellectual property ownership considerations are guided by the University's intellectual property regulations and by the intellectual property provisions contained in the research project's funding agreement and, where the research is government sponsored, the "National Principles of Intellectual Property Management for Publicly Funded Research".
- (d) Ownership and associated rights of intellectual property generated from research projects that utilise the University's resources, facilities and apparatus are vested in the University.
- (e) Arrangements with collaborative research partners should include agreement on ownership of equipment, research data, intellectual property and sharing of resources. A collaborative partner with joint ownership rights to data but is not custodian of the original research data, should have unhindered access rights to the original data including the right to own a copy of the data.

## **9. Transfer of research materials and data**

- (a) When a chief investigator of a research project transfers to another institution, agreement on the terms of (possible) transfer of the research project must be reached by a negotiated process between the University, the new institution, other partners (if collaborative) and the funding agency(s).
- (b) When a research project and original data are to be transferred to another institution, and where the University retains no further involvement with the research project or interest in background intellectual property, all original research data may be transferred. Where applicable, the University may reach agreement on future access to any transferred data and whether copies of original data should be retained by the University.
- (c) When a research project and original research data are to be transferred to another institution, but where the University retains its participation in the research project, the University may

make copies of original data subject to negotiated agreement between the parties and contractual obligations in the re-negotiated funding agreement.

- (d) When a researcher leaves the University, and original research data resulting from any research projects associated with the researcher is retained by the University, future access rights by the researcher and whether original and confidential data may be copied should be negotiated where applicable.
- (e) When student researchers and visiting fellows leave the University they must receive written permission from the chief investigator before they can remove any research materials or data or make copies of research data resulting from their involvement with a research project.

## **10. Access to research materials and data**

- (a) Research materials and data must remain available and accessible for the duration of their retention requirements.
- (b) The University has a right to access research data of any research project undertaken at the University.
- (c) Access to research data by third parties is determined by a number of factors including legislative requirements, confidentiality considerations, commercial reasons, privacy issues, legal reasons, as well as the scholarly convention of encouraging unrestricted availability of research results.
- (d) Generally, in the interests of fostering scholarly research, once a publicly-funded research project has been finalised (e.g. a manuscript has been published) researchers should make available upon (written) request research materials and data to researchers, research trainees and students, and with minimum restrictions and cost. Granting of access is subject to ethical, confidentiality and privacy considerations and any other relevant restrictions that might apply.
- (e) The University is required to comply with legislative requirements that permit timely access to its records by authorised external agencies such as the Office of the Auditor General, Freedom of Information Commissioner, Commonwealth

Ombudsman, Corruption and Crime Commission, the Federal Privacy Commissioner, and by officials with responsibilities for monitoring the University's compliance with human and animal research regulations.

- (f) Research data is accessible as part of a legal process such as discovery or subpoena. This means that in the event of legal proceedings the University's legal staff and outside legal counsel, engaged by either party, have a right to access any research data relevant to the litigation.
- (g) The Freedom of Information Act (1992) provides a general right of access for interested persons to information held by public agencies. The general premise of the legislation is that information should be made available unless there is a reason given in the legislation to refuse access. The Act's exemption provisions, however, allow the University to protect private or confidential information from disclosure.

Whereas some records associated with a research project may not be exempt from disclosure under FOI (such as project title, investigators, project summary) any personal information about individuals, confidential research data, commercial-in-confidence considerations such as trade secrets, and information that would be privileged from production in legal proceedings on the grounds of legal professional privilege would be protected from disclosure.

- (h) Staff must comply with provisions concerning the protection of personal information contained in funding agreements. Commonwealth funding agreements typically require compliance with the *Privacy Act 1988*, an Act concerned with the security, access and disclosure of personal information.
- (i) Scholarly journals may require access to research data as a condition to publishing research papers.
- (j) Unhindered access to premises and records should be given to any authorised person from the sponsor of the research project. Access is usually required for audit purposes, and should be authorised in accord with access provisions in the funding agreement and/or as seen appropriate.

- (k) Staff with custodianship of research materials and data must not allow unauthorised copying or access to unauthorised persons or agencies.
- (l) Access to data involving human participation may require the approval of the Research Ethics Office.
- (m) Parties to a research project, including researchers, visiting fellows, and students, are entitled to access research data during and following the completion of the project.

## **11. Confidentiality of research materials and data**

- (a) Primary materials and confidential research data must be kept in secure storage. Computing systems used for storing confidential research data must be secure and meet appropriate network security and access control standards.
- (b) Custodians of confidential information have a duty of confidence to ensure the proper storage, security, access and release of confidential information.
- (c) There must be no unauthorised access, copying and disclosure of confidential research data.
- (d) The Chief Investigator must ensure that research staff associated with the project sign a relevant confidentiality agreement and are aware of the University's confidentiality contractual obligations contained in the funding agreement.
- (e) Staff with authorised access to confidential information must maintain that confidentiality and not disclose or allow to be disclosed to any person any confidential information. Particular care must be exercised when confidential data are made available for discussion.
- (f) Confidential information must not be used in any way other than for the purpose intended and in accord with the terms of the funding agreement except with appropriate written consent.

## **12. Retention of research materials and data**

- (a) The chief investigator, who has primary responsibility for a research project, is responsible for ensuring that research data and

primary materials resulting from the research project are retained for the appropriate period of time.

- (b) In general, research data should be kept for a minimum of 5 years from the date of publication or 5 years after submission of the final report (if the former is not relevant) unless a longer retention period is shown in the University's Functional Records Disposal Authority. This is available at the Records Management & Archives homepage. The 5-year ruling exists to allow sufficient time for analysis and review of the research data by the scientific community.
- (c) Researchers may retain research records for longer than 5-years or than the retention periods specified in the Records Disposal Authority if they are of continuing value to the researcher. The following are given as examples:
  - (i) For most clinical trials, retaining research data for 15 years or more may be necessary.
  - (ii) For areas such as gene therapy, research data must be retained permanently (eg patient records).
  - (iii) Research data that has long-term or heritage value should be kept permanently. This includes any original research data with national or international significance and that makes a substantial contribution towards the professional body of knowledge and/or has commercial and intellectual property spin-off.
  - (iv) Records relating to investigations by a Committee of Inquiry into serious allegations of academic fraud, misconduct in research matters and serious breaches of ethical practice are retained for 12-years.
- (d) When applicable, research data must be retained for at least as long as the life of the patent (and extensions) or other intellectual property consideration to ensure the protection of intellectual property.
- (e) Research data relevant to a project that is subject to allegations of scientific or financial misconduct or conflict of interest, or to legal processes such as court discovery and subpoena, or required for any official internal or external review or investigation must be protected and retained until the matter is resolved. This

requirement applies regardless of whether the retention period indicated by the relevant disposal authority has expired.

- (f) Research data resulting from short-term research projects undertaken by students for assessment purposes should be retained for 12 months after the completion of the project. In some cases it may be preferable to retain the research data until the degree is awarded to the student.
- (g) Any specific requirements contained in funding agreements for the retention of research data and records should be observed.

### **13. Destruction of primary materials and data**

When research data and primary materials are scheduled for destruction (that is, when the specified retention period has finished) the following guidelines for their secure and safe disposal should be observed. These methods will help to ensure that no information is retrievable, and therefore the unauthorised access to confidential information will be prevented.

- (a) Confidential hard copy research data should be destroyed by shredding. If access to a shredding machine is not practicable then a confidential waste bin may be requested from the Office of Commercial Services.
- (b) Confidential research data held in electronic format should be destroyed either by physical destruction of the storage medium (*e.g.* cutting or smashing) or by digital file shredding. Destruction methods must ensure that information is unrecoverable. Although rewriting, degaussing and reformatting can be used to scramble data which makes recovery more difficult, staff should be aware that data can still be retrieved after applying these methods.
- (c) The use of the “delete” function in software packages is not sufficient to destroy electronic records stored on media such as floppy disks, hard disks and rewritable optical disks, as the information may still be recovered.
- (d) Audiovisual tapes, films and photographs should be physically destroyed, or the information overwritten, so that no information is retrievable. Shredding, cutting and chemical recycling are appropriate methods of destruction.

- (e) Where desktop computers and personal servers have been used to store confidential research data they should be reformatted before being disposed.
- (f) Staff should ensure that any backup copies of research data are destroyed.
- (g) Hazardous materials including chemical, biological and radioactive materials must be disposed of in strict compliance with legislative regulations and occupational safety and health requirements.
- (h) The University is required to follow an accountable and documented process for the destruction of its records including research data. A destruction list must be prepared by the researcher/administrator and submitted to the appropriate School Dean for authorization. Formal disposal procedures support organisational accountability and transparency and ensure that any disposal action can be justified.