Office of the State Archivist

DIGITISATION STANDARD

Technical Standard for Permanent Paper Records

Our principles:

Value: *We maximise the value of our state's information assets*

Manage: *We apply a risk-based approach to managing information assets*

Share: *We enable safe and secure sharing of information*

14 October 2024

Tasmanian Government

CONTACT US

Office of the State Archivist

www.osa.tas.gov.au

osa@libraries.tas.gov.au

03 6165 5581

This is a living document and we will make minor changes as needed. If you notice anything that needs updating, please let us know.

The *Digitisation Standard: Technical Standard for Permanent Paper Records* is part of the *Tasmanian Government Information Management Framework.*

Every five years we will review, update and reissue all of our Standards to ensure they reflect current best practice. The scheduled review date is October 2029.

Document Development History

Version	Date	Comments
1	14/10/2024	Authorised release
A	30/05/2024	Consultation draft

Table of Contents

Purpose

This Standard describes minimum requirements for **preservation quality** digital copies.

This Standard applies to the process of scanning or converting a physical paper record to digital format.

This Standard meets the conditions in the *Disposal Schedule for Source Records* (DA2159). Use this Standard for **permanent records** if you intend to dispose of the original paper records.

We recommend you use this Standard for digitisation of long-term temporary records (for example, personnel records, building and planning applications, client case files) if you intend to dispose of the original paper records.

Scope

This Standard applies to all organisations defined in the *Archives Act 1983* (Tas).

Do not use this Standard for born digital records or for converting non-paper records.

Authority

This Standard is issued under Section 10A of the *Archives Act 1983* (Tas).

Implementation

When implementing this Standard, consider **value** and **risk.** In practice, this means that resource and effort should be directed to high-value, high-risk records.

The State Archivist sets the risk tolerance for Permanent records.

> Permanent records are to be transferred as State archives for addition to the Tasmanian Archives when no longer required for official purposes. Less than 5% of all records created by government are of permanent retention value. These **high-value records** are kept as the documentary heritage of the State of Tasmania.
>
> ***The State Archivist's tolerance of risk to these records is low.*** This means prioritising management of these records above others and consulting the Office of the State Archivist for guidance on appropriate methods for their storage, preservation, and accessibility.

Your organisation sets the risk tolerance for Temporary records.

> Your organisation's **high-value records** are records that your business could not function without.
>
> Your organisation's **high-risk records** may include, but are not limited to:

- those likely to be required in legal proceedings
- highly confidential or highly classified material
- those of potential value for sharing across government in response to high priority business
- commercially sensitive information
- personal or sensitive information.

> Identifying your high-value, high-risk records means that you can prioritise effort and resource to these records, over, for example, low-value, low-risk records.

We have adopted a risk-based approach based on feedback and current best practice. We recognise that this new approach is different from our previous focus on compliance, and we will support all organisations implementing this Standard. Further information and advice are provided in our Implementation tools.

We recommend that you apply a risk-based approach to digitisation of records. You should follow your organisational risk management processes.

Note

This Standard is part of the Digitisation Toolkit and replaces *State Records Guideline No 8: Digitisation and Disposal of Source Records* and *State Records Guideline No 19: Digital Preservation Formats*.

Application of this Standard supports the acceptance of digitised records as admissible evidence. *Legal Admissibility of Records* provides more guidance.

If you are digitising audio-visual formats to access or preservation-level, please contact us to discuss.

Minimum Requirements

These minimum requirements meet the conditions in the *Disposal Schedule for Source Records* (DA2159).

TECHNICAL SPECIFICATION

	Preservation Version	Access Version
Purpose	Preservation	Access or derivative
File type	TIFF 6.0	JPEG or PDF
Manipulation	none	May include tonal adjustments, OCR, sharpening, includes edge of item
Compression	uncompressed	JPEG compression, Photoshop Level 7-10
Format type and Resolution	*Paper documents (unbound) and bound volumes* A4 and under: 300 PPI* A4 and over: 400 PPI*	*(A3) 4961 pixels longest edge, original resolution or PDF* 300 PPI*
Bit depth	8 bit	8 bit
Colour space	ProPhoto RGB, Adobe 1998 or native capture profile	sRGB or Grey Gamma 2.2

Table 1: Technical Specification for Digitisation of Preservation and Access Versions

> Note: *PPI (pixels per inch) and DPI (dots per inch) are effectively the same.
> Outsourced digitisation will most likely be in PPI because providers use specialised equipment.
> Digitising in-house will most likely be in DPI. Standard office equipment like multi-function devices (printer/copier/ scanners) typically only digitise in DPI.

IMAGE CAPTURE PROCESSES

Use widely accepted file formats with open, documented standards. Recognised preservation file formats include TIFF, PDF/A and JPEG 2000. Avoid using proprietary file formats.

Consult *Sustainable Digital File Formats for Creating and Using Records* for a full list of acceptable file types. If you are planning to use a file format not listed in this guide, please contact us.

Ensure image capture processes are consistent and repeatable. Processes include:

- Keeping a small edge or border around the image to preserve image integrity and context. Avoid cropping images.
- When colour accuracy is important, using software products such as GoldenThread or X-Rite ColorChecker.
- Maintain consistent colour balance and brightness settings to avoid loss of image information, for example, blown out highlights.
- If you are scanning multiple pages, digitise as single page TIFF files, not multi-page TIFF.
- Retain appropriate metadata about colour profiles to understand and replicate the original colours. Common profiles include Adobe RGB (1998), sRGB, or Gamma 2.2 greyscale.
- Use scanning software settings to add additional metadata about ownership and custody. For example: *Tasmanian Archives and State Library Heritage Collections – Libraries Tasmania*.
- Scan documents at 100% where possible.

- Apply Optical Character Recognition (OCR) where appropriate to support text searching.
- Create access copies when scanning for preservation. This will reduce the need to constantly retrieve/access your preservation versions, which can lead to image degradation and data loss.
- Some software may automatically correct imperfections. If you don't want this automation, conduct tests before you start processing.

Care and handling:

- Bound volumes should not be scanned with flatbed scanners. Pressure applied to flatten them for image capture can break the spine or damage brittle pages.
- Support large or oversized items when scanning to avoid damage.
- Use spacers (such as foam or foam core) if using Perspex to flatten fragile items.

Metadata:

- Capture any metadata from the paper original (for example dates, titles, names, security marking, etc).
- Consider capturing metadata related to information security classification, copyright or any other policies governing use, intellectual property rights and access to the records.

Decisions about image capture and post-production processes should be documented in your Digitisation Plan. For more information about documentation, refer to our *Digitisation Projects: Plan Before you Scan.*

QUALITY ASSURANCE PROCESSES

Document any quality assurance processes or quality checks in your Digitisation Plan or scanning procedures.

Image accuracy checks:

- All content, for example, notes in margins, sticky or post-it notes, etc is captured in the scanned image.
- All images are legible to the human eye, including hand-written annotations.
- All images are in correct order and alignment when compared to the source document.
- All pages are successfully scanned (no misfeeds, missing pages, etc).

Record accuracy checks:

Check for accuracy when records are registered into the recordkeeping system. Each record must:

- Include all pages of the original document and be registered in the correct location.
- Have attached metadata that is error free and is captured at both record and file level.

Note: The Appendix includes examples of quality assurance statements.

TRANSFER TO THE TASMANIAN ARCHIVES

Use secure file transfer protocol (SFTP), password-protected hard drives or universal service bus (USB) media to temporarily store and transfer permanent records to the Tasmanian Archives.

Appendix

QUALITY ASSURANCE PROCESSES (QUALITY CHECKS)

Establish and document your processes to support acceptance of digitised records as admissible evidence.

Image accuracy checks

An assessment for image accuracy would concentrate on technical aspects such as exposure, sharpness, contrast and so on.

Example quality statements:

- The scanner operator completed a training course conducted by the software provider.
- Tests were conducted to ensure image quality before processing started.
- Scanning equipment is routinely checked and maintained every morning and calibrated regularly.
- The operator completes a weekly batch scan report that includes the number of documents that have been scanned that can be matched with the image files.
- The operator visually compares each scanned image with the original, and date stamps each image.
- Unique identifiers are applied, so if there are missing numbers, an error can be picked up.
- The Records Management Unit samples 100% of the scanned images as part of registration processes.
- If a quality failure is identified during the scanning process, the source record will be retrieved from storage and re-scanned.

Record accuracy checks

Record accuracy checks are required to accurately capture and preserve the digitised records and keep them accessible while in your custody.

Example quality statements:

- The Records Officer is responsible for all records registration.
- The scanned images are visually compared to the source record when the records are registered by the Records Officer.
- Our system is configured so that the mandatory metadata must be applied at the time of registration.
- The weekly batch scan spread sheet is matched against the audit log in the system by a different operator.
- A sample is selected at random by the Archiving Officer, who checks the digitised record with the source record for inconsistencies. If the Archiving Officer is satisfied the records meet quality standards, this is documented. If the Archiving Officer is not satisfied, then they action according to their processes for non-compliance and increase sample size.
- The recordkeeping system is configured to provide regular reports of registration activity and flag inconsistencies, for example, information security classification irregularities.
- Any quality failures in the process of registering the digitised records will be flagged in the audit logs and investigated within five working days.

Acknowledgements

Libraries Tasmania 2021, *Preservation Digitisation Standards: For Permanent and Long-Term Temporary Collection Items and Records*, Libraries Tasmania, November 2021.

Tasmanian Archive and Heritage Office 2015, *State Records Guideline No 8: Digitisation and Disposal of Source Records,* TAHO, v4 2015, viewed 29 May 2024, <https://www.osa.tas.gov.au/information-management-framework/older-guidelines-and-advice>.

Tasmanian Archive and Heritage Office 2015, *State Records Guideline No 19: Digital Preservation Formats,* TAHO, v2 2015, viewed 29 May 2024, <https://www.osa.tas.gov.au/information-management-framework/older-guidelines-and-advice>.

We thank the Council of Australasian Archives and Records Authorities (CAARA) member institutions that have influenced our *Digitisation Toolkit.*

More Information

The Digitisation Toolkit helps you digitise and preserve your high-value, high-risk information. Using this toolkit will help you meet reproduction standards so you can destroy original or source records. The Toolkit includes:

- *Application to Dispose of Permanent Paper Source Records* – a checklist to help you prepare your application to our Office.
- *Digitisation Projects: Plan Before you Scan* – will help you manage large volume digitisation or back-scanning projects.
- *Digitisation Standard: Technical Standard for Permanent Paper Records* – describes minimum requirements for preservation quality digital copies. Use this Standard for permanent records and to meet the conditions in our *Disposal Schedule for Source Records* (DA2159).
- *Digitisation Toolkit FAQs* – your guide to the Toolkit.
- *Disposal Schedule for Source Records* (DA2159) – the legal instrument you use to dispose of the source records.
- *Sustainable Digital File Formats for Creating and Using Records* – this CAARA publication recommends and lists digital formats.
- *Three Steps for Better Scans* – a staff educational poster.

Other relevant resources include:

- Office of the State Archivist 2024, *Information and Records Management Standard*, OSA, version 1.1, viewed 30 May 2024, <https://www.osa.tas.gov.au/information-management-framework>.
- Office of the State Archivist 2020, *Legal Admissibility of Records*, OSA, viewed 29 May 2024, <https://www.osa.tas.gov.au/information-management-framework>.