

Solutions for Storage: Guidelines on the Physical Storage of State Records

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Related Recordkeeping in Brief leaflets

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[Recordkeeping in Brief 15: Records in Transit](#)
[Recordkeeping in Brief 16: Safe Storage](#)

Bibliography

Browsable version

The guidelines can also be viewed as a [browsable document](#).

Foreword

The [State Records Act 1998](#) (NSW) specifically addresses the importance of protecting records. Section 11 provides that '*each public office must ensure the safe custody and proper preservation of the State's records that it has control of.*' To assist public offices to meet this requirement and to protect the State's most valuable documentary resources, State Records has produced a [Standard on the Physical Storage of State Records](#) and *Solutions for Storage: Guidelines on the Physical Storage of State Records*.

The main aim of the guidelines is to assist public offices to meet the mandatory minimum compliance requirements in the *Standard on the Physical Storage of State Records*. However, the guidelines contain additional information in order to educate and inform public offices on best practice for storing records.

The guidelines suggest practical methods to ensure that:

- records are stored in the most cost-effective manner possible
- records are protected, secure and accessible for as long as they are required to meet business and accountability needs and community expectations, and
- records of continuing value which will be transferred to State Records' control and/or custody as State archives are stored in the best conditions possible to promote their longevity.

The guidelines contain recommendations only. If the public office wishes to meet the compliance requirements in the standard in other ways, they may do so.

1. Introduction

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1.1 Background

The State Records Authority of New South Wales, known as 'State Records' assists public offices to implement the [State Records Act 1998](#) by issuing standards, codes of best practice and associated guidance. Part 2, s.11 of the Act states that '*each public office must ensure the safe custody and proper preservation of the State's records that it has control of.*' To help public offices meet this requirement, State Records has issued a [Standard on the Physical Storage of State Records](#) and these guidelines.

1.2 Purpose

Solutions for Storage: Guidelines on the Physical Storage of State Records have been principally developed to assist public offices to meet the compliance requirements in the standard. However, the guidelines contain additional information on suitable measures for records storage in order to encourage public offices to achieve best practice.

Implementation of these guidelines will ensure that:

- records are stored in the most cost-effective manner possible
- records are protected, secure and accessible for as long as they are required to meet business and accountability needs and community expectations, and
- records of continuing value which will be transferred to State Records' control and/or custody as State archives are stored in the best conditions possible.

1.3 Scope

These guidelines cover all types of storage media (for example, paper, tapes, disks) but exclude the storage of electronic records on networks or on hard drives. These electronic records will require different storage options. These will be examined under separate guidance to be issued by State Records.

The guidelines cover active and semi active State records in the custody of public offices, contractors or private organisations. They also give advice regarding storing records with both accredited and unaccredited commercial providers.

The guidelines are not intended to cover the storage of State archives, that is, records under the control of State Records. However, there are some references to archives and how they should be stored, in order to encourage public offices to adopt a holistic management strategy for storing records. See Section 2.3 [The continuum approach](#). Storage issues for State archives in the custody of public offices under distributed management agreements will be examined in future guidance from State Records.

1.4 Application

The *Standard on the Physical Storage of State Records* applies to public offices as defined in s.3 of the State Records Act 1998. Public offices exempt from Part 2 of the Act, namely the Governor acting in a vice-regal capacity, the Houses of Parliament, and courts and tribunals in respect of their judicial functions, are not required to comply with this standard except by agreement.

The guidelines support this standard but contain recommendations only. If a public office wishes to meet the compliance requirements in the standard in other ways, they may do so. The guidelines may also be used by other jurisdictions and private bodies seeking to improve the storage and management of their records.

1.5 Structure

As the guidelines are intended to support the *Standard on the Physical Storage of State Records*, they are roughly structured according to its principles. However, particular issues of importance, such as continuum management, security and commercial storage contracts have also been treated in more depth in order to assist public offices to meet aspects of the principles.

1.6 Acknowledgements

The information contained in the guidelines is drawn from current national and international standards, notably:

- Australian Standard AS 4390—1996, *Records Management*, Part 6, *Storage*
- British Standard BS 5454—1989, *Storage and Exhibition of Archival Documents*, and
- Draft International Standard CD 11799—1998, *Information and Documentation: Storage Requirements for Archive and Library Materials* (now discontinued).

The guidelines also draw heavily on Ted Ling's publication, *Solid, Safe, Secure: Building Archives Repositories in Australia*, National Archives of Australia, Canberra, 1998, which is recommended for any organisation intending to build their own archival storage facility. Other sources consulted are listed in the bibliography.

1.7 For more information

An extensive [bibliography](#) is attached to these guidelines for further reference. In addition, State Records is intending to produce further guidelines, such as guidelines on the creation of records, the management of technologically dependent records, outsourcing and privatisation which will complement these guidelines and help to support the *Standard on the Physical Storage of State Records*.

For further information about recordkeeping standards and code of best practice and associated guidance, contact [State Records](#).

2. Storage Regimes for Records

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2.1 Active, semi active and inactive records

Records have traditionally been managed by dividing them into three major categories:

- Active records: those records in frequent use, regardless of their date of creation, required for current business relating to the administration or function of the organisation.
- Semi-active records: those records which are required infrequently in the conduct of current business. They may be referred to once a year, or once every few months. Semi active records are also called *intermediate* or *semi-current* records.
- Inactive records: those records which are no longer required for the conduct of business. They are ready for disposal by destruction or transfer to archives.

2.1.1 Still in use records

The State Records Act (s.28) provides that '*a State record is to be regarded as no longer in use for office purposes in a public office [that is, inactive] if the record is more than 25 years old.*' If the record is still being used for official purposes after 25 years, under the Act the public office is required to make a '*still in use*' determination. See State Records' [Procedures for Making Still in Use Determinations](#) for more information.

'Still in use' records are treated by the public office as active records. However, as they are State records of continuing value, they should be placed in the best storage conditions possible while not in use.

2.2 Primary, secondary and archival storage

Storage regimes have often corresponded to the three categories outlined in Section [2.1 Active, semi active and inactive records](#).

- Primary storage is usually chosen for active records. As these records are frequently used, they need to be close to the office or work areas and quickly retrieved. It is a costly way to store records as office space is often expensive.
- Secondary storage is a more suitable option for semi-active records, as they are not needed as frequently, and for inactive records awaiting disposal. Secondary storage can be inhouse in public offices or in commercial facilities.

Secondary storage facilities are usually warehouses or repositories which are often located away from the centre of cities. Records retrieval is slower as the facilities are away from offices and the records need to be transported to office locations. However, secondary storage offers low cost bulk storage.

- Archival storage facilities are for inactive records of continuing value. These records are usually stored in a specially designed repository, with suitable environmental conditions to ensure that the records will survive as long as possible.

The guidelines concentrate on primary and secondary in-house storage as these are the scope of the *Standard on the Physical Storage of State Records*. The guidelines also give advice regarding storage with commercial providers.

2.3 The continuum approach

The Australian Standard AS ISO 15489-2002, *Records Management*, embodies recent thinking about records management and recordkeeping. The standard outlines a methodology for designing and implementing recordkeeping systems (the 'DIRKS' methodology) so that records are captured and managed in a controlled way. For example, it advocates longer term strategies for records management, whereby records are managed from before their creation, through their active and semi active phases to the time of their destruction or management as archives.

A 'continuum' approach to the storage of records ideally involves:

Identifying what records need to be captured

An analysis is conducted to identify what records need to be created in order to meet business and accountability needs and community expectations. This should also involve a risk assessment looking at what the risks may be if records are not created.

Identifying retention periods for the records created

This step involves having current disposal authorities in place. These authorities are then consulted to determine how long the records will be required to be kept. State Records issues general disposal authorities for records common to most NSW public sector organisations, such as personnel and accounting records. Organisations also need to develop functional authorities relating to their particular needs and have them authorised by State Records.

Ensuring records are created in suitable formats

Knowing the retention periods for records at or before their creation allows the organisation to create records in the most suitable formats and with the most suitable materials for their expected usage and retention. For example, if the records are created on paper and have long term or archival value, the organisation can decide to create them using archival or permanent paper, which is likely to last much longer than recycled paper.

Ensuring records are stored appropriately, according to their retention periods and formats, from the time they are created

By understanding the retention period and the longevity of storage media, organisations can choose the most appropriate ways to store the records. For example, if electronic records stored on computer disks need to be kept long term, arrangements can be made for:

- storing them in the optimal environmental conditions for electronic media from the time they are created, and
- organising migration programs to ensure the data is moved to new hardware and software platforms when appropriate.

This step can also encourage more cost effective approaches as short term records do not require the same degree of protection as records of continuing value.

If the public office can implement such long term strategies for storage, in conjunction with their other recordkeeping strategies, it is highly recommended that they follow this path. State Records has released guidance to support continuum management, such as the exposure draft of [Strategies for Documenting Government Business: The DIRKS Manual](#) (the 'DIRKS' manual), developed in association with the National Archives of Australia, which expands on the DIRKS methodology in the Australian Standard.

3. The Guidelines

3.1 Location of buildings and storage areas

[3.1.1 Building location](#)

[3.1.2 Building construction](#)

[3.1.3 Records storage areas](#)

The physical integrity of records can be affected by risks such as fires, floods and earthquakes, and man-made hazards like dangerous industries and vandalism. As records are an important asset for the organisation, every effort must be made to identify potential dangers and to ensure that records are not stored in their vicinity. Client convenience should be a consideration when choosing a location, but guarding against dangers is also a primary concern.

3.1.1 Building location

Buildings used to store records should be located away from known hazards as such hazards may pose significant risks to records survival. The *Standard on the Physical Storage of State Records* states that, if possible, buildings should not be near the following risks:

- heavy atmospheric pollution, like industrial pollution. Pollutants in the air can be very damaging to records, causing them to deteriorate at an accelerated rate
- hazardous industries and adjacent sites, like explosives or chemical factories, gas and oil plants. Industries that attract rodents, such as wheat processing factories, may also be considered 'dangerous' in this context
- flood plains, rivers, creeks, dams and oceans
- land liable to subsidence
- strategic installations which may be a target in armed attack, and
- bush fire prone areas. [\[1\]](#)

Other risks, such as the presence of flight paths and the risks of vandalism may also be taken into account.

Methods of assessing sites

As active records are often stored within office environments, the organisation may have little choice about where buildings are situated. However, before an organisation purchases or enters a lease for a building or chooses an area to be used for secondary records storage, the locality should be investigated thoroughly in order to identify dangers. The Corporate Records Manager may be responsible for this investigation, or it may be appropriate to delegate this responsibility to a suitable officer who reports to the Corporate Records Manager. Assessments of how far the site needs to be from known risks should be made, taking into account the factors present at each location.

Methods of collecting information about the site may include:

- checking newspapers and other literature to determine any known local problems - natural, industrial or social
- inspecting the site and its surrounds
- examining local government records, such as contour maps, and
- discussing the site with those with local or specialist knowledge.

Once potential hazards in the locality have been identified, estimations of how far the site should be located away from each known hazard will pinpoint the most suitable area to locate the facility. Research, inspections or decisions regarding the location of sites should be documented.

If compromises must be made regarding the site, all possible steps should be taken to protect records. For example, if buildings containing records are on a flood plain, then records should not be placed on lower floors and shelving should be at least 100-150 mm above the floors.

Another example is where records are required to be used in manufacturing plants or on construction sites. In this case, the Australian Standard on Records Management recommends that appropriately designed protective packaging, handling and storage systems be used to diminish risks. [\[2\]](#)

Protection measures for known risks should form part of the organisation's *Disaster Management Plan*. See the [Standard on Counter-Disaster Strategies for Records and Recordkeeping Systems](#).

3.1.2 Building construction

It is important to ensure that buildings used to store records:

- are soundly constructed of appropriate materials (if possible, they should also be insulated)
- are free from moisture penetration, such as rising damp and leaks, and
- have good drainage and water run-off.

The Australian Standard on Records Management AS 4390-1996 also recommends that ideally the building should be made of steel, reinforced concrete or concrete blocks. According to the standard, these recommendations also apply to the walls that separate the storage areas from office areas. [\[3\]](#)

Measures should be taken to ensure all buildings housing records are secure against intruders, free from infestation by vermin (See Section [3.6.2 Pest control](#)), and have adequate protection against fire (see Section [3.6.3 Fire prevention and suppression](#)).

Note: It is not acceptable to store records in sheds with no insulation and inadequate protection from the elements or intruders.

Methods of assessing buildings

Again building risks need to be investigated and brought to the attention of senior management. The Corporate Records Manager should undertake this

investigation, or should delegate it to an officer with appropriate skills who can report back.

Methods of collecting information about the site include:

- inspecting the site and its surrounds, and
- discussing the site with those with specialist knowledge, such as building maintenance staff and fire inspectors.

Research, inspections or decisions regarding the location of buildings should be documented.

If compromises regarding the building must be made, steps should be taken to protect records. Protection measures from known risks should form part of the organisation's *Disaster Management Plan*. See Section 3.6 [Protection from disaster](#).

Experts and authorised literature should be consulted when a repository for archives is to be designed or built or an when existing building is to be refurbished for this purpose. [4] In particular, conservators should be consulted throughout the project.

3.1.3 Records storage areas

If the Corporate Records Manager is unable to influence the site of the buildings, they should ensure that the location within the building for records storage is carefully chosen to minimise risks.

Storage areas should not be located near areas of known risk, including:

- chemical storage areas
- kitchens and washrooms
- air conditioning units, air filtration and ventilation systems, or
- attics or basements which do not meet the requirements of the *Standard on the Physical Storage of State Records*.

Ideally, the storage area should not be located near plumbing and water pipes. Electrical wiring should pass through conduits. Adjacent activities should pose no threat to records.

If these risks are unavoidable, the organisation will need to introduce protection measures. For example, if records are stored in a basement, then the basement must be waterproof and humidity levels must be adjusted so that mould does not develop.

Note: It is not acceptable to store records in basements subject to flooding and mould; or attics, where they are subject to extremes of temperature and humidity.

Dedicated rooms

If possible, the storage areas within buildings should be separated from work areas by fire rated walls. If the collection is very large, the store should be subdivided into smaller units by the use of dividing fire resistant walls. These measures allow the storage area to be secured. They also enable fire protection measures to be introduced more easily and environmental conditions to be maintained at constant levels. See Section [3.3 Environmental conditions](#) and Section [3.6 Protection from disaster](#).

The arrangement of the storage areas should allow for ventilation. See Section [3.4.1 Shelving and cabinets](#) for more details. Other factors, such as wheelchair access, trolley movement and access for ladders should be considered choosing locations for shelving.

Rooms should be dedicated to records storage or records and library storage. That is, other equipment and supplies, such as furniture and chemicals, should not be stored in records storage areas. The main reasons for creating a dedicated space are to:

- avoid additional risks. For example, if chemicals were stored in the area the risk of contamination would be heightened. If computers were stored in the area the risk of theft would be greater, and
- restrict access to the area more rigorously. For example, if furniture and stationery were stored in the area more people would require keys or passes.

As suitable storage conditions for library materials are similar to paper based records, records and library materials may be stored together. In the latter case, however, records requiring additional security should be placed in lockable shelving or equipment. See Section [3.2.3 Extra security for records with security restriction.](#)

Any waste should be removed promptly and any structural obstacles should be removed to ensure that the storage area is safe.

If records are near workgroups, rather than in dedicated rooms, lockable shelving (such as shelving with pull down covers) could be used to control access and give protection. Only records should be stored in the shelving units. See Section [3.2 Security.](#)

Doors

Doors to storage areas should be kept in a closed position and, if possible, should be fire resistant. When it is necessary to keep doors open under normal use, they can be fitted with magnetic devices designed to permit automatic door closing upon activation of the building fire alarm/detection system. Doors should be lockable and wide enough to allow for the movement of trolleys. [\[5\]](#)

Ceilings and floors

Ceilings should be high enough to allow for about 500mm clearance between top of shelves and fire sprinkler heads. [\[6\]](#) This is to ensure that the sprinklers are not accidentally activated.

Provision should be made for the drainage of water. This might include the installation of drains and slight angling of the floor to prevent water pockets.

It is vital to ensure that the load bearing capacity of the floor is adequate to cope with full shelves of records. A structural engineer and/or the manufacturer should calculate and recommend floor loading requirements based on the density of quantity of material stored. [\[7\]](#)

Ideally, the materials used for walls, ceilings and doors should be hard-wearing and not likely to shed dust or grit. Internal structures should be in good condition. Materials should not emit substances, such as acidic gases, when they decompose or are subject to fire. [\[8\]](#)

Windows

Ideally, buildings or rooms used for records storage should not have windows or skylights. In particular west facing windows should be avoided as they present dual dangers to records from heat and light. If there are windows or skylights, measures should be taken to prevent natural light from entering. For example the windows can be fitted with:

- heavy curtains, shutters or blinds, preferably of heat reducing fabric, to reduce or eliminate illumination
- screens to prevent ultra violet light from entering, or
- ultra violet filtering film.

Methods of assessing storage areas

The Corporate Records Manager or their delegate should investigate all existing and potential records storage areas in the public office in order to identify dangers. Methods may include:

- inspecting the locations

- checking building plans, and/or
- discussing locations with those with relevant knowledge, like the building manager and disaster management experts.

Research inspections or decisions regarding the location of storage areas should be documented.

If ideal conditions cannot be met and compromises must be made, all steps possible should be taken to protect records. Risks should also be managed as part of disaster management programs until the records can be relocated. The need for the removal of the records to a safe environment should be addressed in all of the records management program's planning activities.

[1] Australian Standard AS 4390—1996, *Records Management*, Part 6, *Storage*, Clause 5.2; British Standard BS5454—1989, *Storage and Exhibition of Archival Documents*, Clause 6.4; International Standard ISO CD/11799 (draft) —1998, *Information and Documentation – Document Storage Requirements*, Clause 4.

[2] AS 4390, *ibid.*, Part 6, Cl.4.

[3] *ibid.*, Cl.5.2.

[4] Ted Ling, *Solid, Safe and Secure: Building Archives Repositories in Australia*, National Archives of Australia, 1998 is a useful text to consult. Planners should also consult relevant standards and international standards including British Standard BS 5454 and AS 4390.

[5] ISO/CD 11799/2, *op.cit.*, Cl.5.3; Ling, *ibid.*, p.37.

[6] Ling, *ibid.*, p.31.

[7] ISO/CD 11799, *op.cit.*, Cl.5.3.

[8] *loc cit.*

3.2 Security

[3.2.1 Buildings](#)

[3.2.2 Records storage areas](#)

[3.2.3 Extra security for records with security restriction](#)

[3.2.4 Staff responsibilities](#)

One of the significant risks to records is the potential for unauthorised access, which may result in alteration, destruction, damage or theft. As records provide evidence of business activity, and are often unique, tampering or loss may result in the inability to meet accountability requirements, embarrassment and even ruin for the organisation. Records may be particularly sensitive if they relate to personal privacy, commercial and personal interests and, in some cases, national security.

To ensure records are protected, access to buildings and storage areas must be controlled, security restrictions should be assigned for particular groups of records and the appropriate levels of secure storage should be allocated. Staff and contractors should be aware of their responsibilities regarding security.

3.2.1 Buildings

Every building poses its own problems for security. Each building will require different security provisions, depending on the nature of the organisation, their premises, management structures, staffing levels, resources and the records they produce.

Risks should be assessed by relevant personnel, preferably with the aid of expert advice. Institutions may be able to request site visits from local fire brigade personnel and police to assist in security audits and risk assessments.

Consultants with disaster management knowledge may also be useful sources of advice. See [Guidelines on Counter-Disaster Strategies for Records and Recordkeeping Systems](#).

At a minimum, records storage buildings should be intruder resistant and access controlled. Means of ensuring this could include some or all of the measures listed below.

Security guards/patrols

Organisational policy will determine whether to employ security staff and after hours patrols. They may already be employed in some office environments, depending on the nature of the organisation's business. Security staff may be required for records storage facilities unoccupied by staff. This need may be determined by considering:

- the nature and importance of the materials held in the facility
- the location of the facility and surrounding risks (See Section [3.1.1 Building location](#))
- recent incidences of burglary or arson in the area, and/or
- the adequacy of alarm systems. Security patrols might replace malfunctioning alarm systems for a short time.

Good perimeter surveillance and lighting may also deter potential intruders.

Intruder alarms

Alarms may already be installed in office environments if warranted by the level of risk. Alarms should also be considered for secondary facilities, whether or not staff work in the buildings. Australian Standard AS 2201.1-5—1986-92, *Intruder alarm systems* may be consulted when installing alarms. Procedures and details of security systems should be subject to rigorous security.

A 'remote' alarm system which sounds at the organisation's security room or the offices of the security firm responsible for the premises is generally recommended. This should then require attendance by a security guard. Remote alarms also ensure there will not be noise pollution in the area around the storage facility.

The organisation needs to adopt rules for response to the storage facility's alarm, including the minimum response time. The security firm should be furnished with the names and after hours telephone numbers of designated records staff members who should be alerted if the alarm activates, and will be expected to attend the premises in the case of an emergency. The organisation is responsible for seeing that this list is kept up-to-date.

Breaches of security should be documented and captured into a recordkeeping system. Shortcomings of the building, staff, records store procedures and the security equipment of the security firm should be highlighted in the report and subsequently addressed by the organisation.

If the records operation is small and the Corporate Records Manager or their delegate is not responsible for the building, many of these matters will be outside their control. In this case, premises should be protected by alarms (if warranted by the level of risk) and that the records manager is contacted if the records are threatened.

Keys, codes or passes

The exterior doors and windows of the storage facility should be lockable, and unnecessary or redundant doors and windows should be blocked. Vulnerable windows can be secured with roll down shutters, bars, grills or intruder resistant glass. The suitability of these measures should be discussed with a crime prevention officer or risk management people within the organisation.

Appropriate keys, codes or passes for doors and windows should be issued to approved personnel, security personnel, building managers and emergency services. Registers of issue should be maintained and policies should be in place regarding duplication of keys, reporting losses and changing the keys, or codes when a staff member or contractor moves to another position. Provision should be made for emergency situations and a master set of keys, pass holders' code

numbers or other necessary details should be kept in a secure place away from the records facility.

3.2.2 Records storage areas

Only those staff members whose positions require access to the records should have access to the records storage areas within buildings. This may be achieved by keys, codes or passes with appropriate access levels.

When there is not a dedicated room for storage, access is more difficult to restrict. Lockable storage equipment, such as a small compactus, should be used if possible, and keys issued only as necessary.

There should be a designated officer responsible for the records who should supervise access to records in the records storage areas. Arrangements should be in place for another responsible officer to deputise in the absence of the records officer. The retrieval and return of material should only be conducted by authorised staff members. External clients should always be supervised. Security measures should be in place to protect the materials, to detect breaches and to confront the persons responsible. See Section [3.9 Accessibility](#) for security procedures for access.

Any routine maintenance work in records storage areas, such as cleaning or repairs, should not be permitted without the presence of an authorised staff member.

3.2.3 Extra security for records with security restriction

Records requiring additional security should be stored in security equipment and access to keys and passes limited to a small number of authorised personnel. The equipment will depend upon the nature of the records and the size of the collection. There should be clear statements of closure or restriction on lists, and warning labels on boxes, file covers and volumes. See also Section [3.9 Accessibility](#).

Note: It is not acceptable to store personal or confidential records in storage areas without access controls.

Strongrooms and vaults

It is strongly recommended that vital records (those records essential to the functioning of the organisation), highly confidential records and other records of continuing value are stored in a strongroom or vault if the facility is available in the organisation. Strongrooms usually have 450mm thick walls and are difficult to penetrate.

Entry to strongrooms and vaults is usually by one or more combination lock/s. Separate officers should hold the combinations for each lock, and the combinations should remain confidential. Combinations should be recorded and stowed in a safe place such as a sealed envelope in a safe with precise instructions regarding the circumstances in which it may be opened, usually only in emergencies.

There should be a back-up for each combination holder, and arrangements in place so that the required number of combination holders are present when required. Special arrangements may need to be made when staff are on leave. Access to a strongroom in the absence of the combinations should be impossible without an expensive visit from a security firm.

An additional benefit of holding records in strongrooms and vaults is that the temperature and humidity levels are usually quite stable.

Strongrooms and vaults are very expensive to build and are most effective if placed in the core of the building, so building a strongroom within existing premises is usually not an option.

Safes

Collections of confidential records or legal records may be held in safes. Safes have a high fire rating as well as being difficult to open without keys or combinations.

Most safes have double locks. The purpose of double locking is that the safe may not be opened by an individual. The keys should be held by separate senior

officers. One or more officers should be authorised to open the safe in the absence of the key holder. Combination locks have been discussed in Section [3.2.3 Extra security for records with security restriction.](#)

Safes are very expensive storage equipment and should be used only for vital records or highly confidential ones. The cost of purchasing safes may eliminate this option for many organisations.

Locked rooms

If safes and strongrooms are not available a locked room may be the most suitable place to store confidential records. See Section [3.1.3 Records storage areas.](#)

Entry to the room may be by key, code or pass which should only be available to officers with the necessary security classification to access the records.

Organisational rules should preclude the divulging of codes and the passing of keys and passes to those unauthorised to use the records.

Locked runs of shelving

Smaller collections of confidential records may be held in locked bays of mobile or fixed shelving. This is suitable for records collections in office environments and those held in workgroups. Keys should only be available to those officers with the necessary security classification. They should preferably be held by the officers responsible for controlling access to the records.

Locked filing cabinets

This option may be selected for very small collections of confidential records in office environments. As with other security equipment, procedures must be in place to see that only those with appropriate security classification can access them. The disadvantages of filing cabinets are:

- they can damage the records they hold (for example, files can get caught), and
- access without using the proper key is simpler than for other storage equipment discussed in this section.

3.2.4 Staff responsibilities

All staff members should be made aware of the importance of security within the building and records storage areas. If the organisation needs more stringent security for some records, policies should be formulated and promulgated to all staff. For example, if active records are very sensitive, 'clean desk policies' may be needed to encourage officers to lock them away when they leave their desks. Staff and contractors should sign confidentiality agreements and meet their responsibilities in terms of securing areas and observing codes of ethics. They should be encouraged to report any damage or security breaches observed.

3.3 Environmental conditions

[3.3.1 Temperature and humidity](#)

[3.3.2 Light](#)

[3.3.3 Air quality](#)

[3.3.4 Magnetic fields](#)

Records may be created in a variety of formats. For example they could be paper records, microforms, photographs, moving images, sound recordings, maps, drawings or electronic records. Many of these formats require special storage environments and equipment to ensure their preservation.

The period for which the record is to be retained will also affect the storage environment chosen. Records required on a long term basis should be stored in the best environmental conditions possible from the time of their creation.

Optimal environmental conditions may be considered unnecessary for records only required in the short term. See Section [2.3 The continuum approach](#).

3.3.1 Temperature and humidity

Temperature and humidity are two of the most vital components in a storage program. High temperature and humidity levels can cause mould to grow and where the relative humidity is too low, records become brittle. When temperature and humidity levels fluctuate sharply, moisture is absorbed and released frequently, causing particular stress to the records. Temperature and humidity levels should remain as stable as possible. For information on monitoring devices see Section [3.7 Maintenance and monitoring](#).

Air conditioned storage should be used where possible and can be fitted with humidification and dehumidification capabilities. [\[9\]](#) Regulating access to storage areas and creating a sealed environment using the building's fabric can assist agencies to achieve good temperature and humidity levels.

At the very *minimum*, active and semi active records in the custody of the organisation should be maintained in a stable environment within a range of 15 to 27° Celsius and 30 to 60% relative humidity to prevent damage. If the organisation has a large quantity of formats other than paper they should consult the appendices to the *Standard on the Storage of State Records* for the best temperature and humidity ranges to maintain.

Note: It is not acceptable for records to be stored in areas subject to extremes of temperature or humidity.

Where air conditioning is not available, stable temperature and humidity levels should be the target. Organisations can achieve this in a number of ways.

Choosing a location that gives constant temperature and humidity levels is one way. Insulation can help to stabilise environmental conditions. Other means of regulating temperature and humidity without air conditioning include installing portable dehumidifiers, using silica gel or Damp Rid or similar products to regulate humidity. However, some of these methods, if used incorrectly, will actually cause more damage, so conservators should be consulted.

The *Standard on the Physical Storage of State Records* states that when records identified as having continuing value are moved to inactive storage (either offsite or internal) the records must be placed in environmentally controlled storage and maintained at temperature and humidity levels as close as possible to those described in the Australian Standard AS 4390—1996, *Records Management*, Part 6, *Storage*, Appendix C (reproduced in the *Standard on the Physical Storage of State Records* as Appendix B). [\[10\]](#)

Environmentally controlled storage in accordance with Appendix B of the Standard is difficult to attain. If organisations are considering providing this storage themselves, experts and authorised literature should be consulted (see [bibliography](#)). State Records should also be consulted as some variations in storage conditions may be negotiated as part of distributed management agreements.

Joint ventures with other public offices in an area may be a more cost effective solution. State Records is also building up its regional repository network to assist public offices to meet this requirement.

If the records are rarely retrieved, they may be directly transferred to State Records or a regional repository once they have reached the age of 25 years.

Transfers should be in accordance with State Records' [Procedures for Transferring Custody of Records as State Archives](#).

3.3.2 Light

Light and heat can accelerate chemical damage to records. It is desirable that natural light is excluded from the storage area and public research rooms as ultraviolet rays have a detrimental effect on records, whatever their format. See Section [3.1.3 Records storage areas](#).

The recommended light intensity for records is 80-240 lux, depending on the usage of the storage area. [\[11\]](#) However, this may be a little low for staff and

clients. See Section [3.7 Maintenance and monitoring](#) for information on measuring light levels.

To protect records:

- lights may be arranged or reflectors used so that light does not fall directly on the records
- globes within the storage area can be of low wattage
- fluorescent lights may be fitted with ultra-violet filters and diffusers to reduce glare and spread the light more evenly [\[12\]](#)
- fluorescent lights that emit low quantities of ultra violet light may be used
- lights can be on timer or motion controlled switches
- incandescent lights may be fitted with heat absorbing filters, and
- fibre optic lighting systems can be installed. [\[13\]](#)

At the minimum, lighting should be ambient (soft and diffused) for short term records. UV filtered fluorescent lighting and timer controlled switches should be installed for records of long term or archival value.

3.3.3 Air quality

Poor ventilation may result in the growth of mould. At the very least, ventilation is recommended for all records. Ventilation can be achieved by such simple means as installing fans. The design of the records area can also assist the circulation of air. See Section [3.4.1 Shelving and cabinets](#). Air must circulate freely and there should be an intake of a reasonable amount of fresh air. However, air entering and then circulated through the building could contain dust and chemical pollutants which cause damage to paper fibres and can irretrievably damage other formats. The following measures can reduce the inflow of dust and other airborne pollutants and should be implemented in areas where archives are stored:

- records should not be stored in heavy industrial locations. See Section [3.1.1. Building location](#)
- inflow ducts should not draw in air from car parks or busy roads
- 'particulate' air conditioning can be installed to filter out impurities where records of continuing value are stored. Specially activated carbon filters can be installed in special purpose records repositories to reduce sulphur dioxide, nitrogen oxides and ozone to 5-10 parts/billion/volume. [\[14\]](#)

3.3.4 Magnetic fields

Some record formats, notably computer disks and tapes, require a storage area free from magnetic fields which can distort the data they contain. It is recommended that, if quantities of computer disks and tapes are to be stored, the organisation consults an engineer to check the premises for magnetic fields. Staff should also ensure that these records are kept away from:

- magnetised shelving
- high voltage power lines
- most machines with electronic motors
- lightning arresters in large buildings
- magnetic flashlights
- fridge magnets
- small headphones, and
- speaker cabinets. [\[15\]](#)

See the National Archives of Australia's *Archives Advice 5: Protecting and Handling Magnetic Media*, listed in [Appendix 1](#), for more information.

[9] Ling, *op.cit.*, p.48.

[10] Records subject to 'still in use' determinations are of archival value and as such, should be stored in archival conditions if they are not used on a day to day basis.

[11] Ling, *op.cit.*, p.53.

[12] *ibid.*, p.47.

[13] ISO/CD 11799, *op.cit.*, Cl.6.5.

[14] *ibid.*, Annex A.

[15] Heritage Collections Council, *Recollections: Caring for Collections Across Australia, Caring for Cultural Material*, The Council, Canberra, 1998, p.136.

3.4 Shelving and packaging

[3.4.1 Shelving and cabinets](#)

[3.4.2 Equipment](#)

[3.4.3 Item containers](#)

When selecting shelving, racking, cabinets, item containers and other storage devices and handling equipment, the physical characteristics of the record and the period for which it needs to be retained should be the major considerations. The shelving and handling equipment and item containers should promote the survival of the records for as long as they are required.

3.4.1 Shelving and cabinets

The *Standard on the Storage of State Records* recommends that shelving, racking and cabinets should be:

Suitable for the type of record stored

Shelving should be of durable, non-combustible material suitable for the retention period of the record. Coated metal shelves and cabinets are preferable to wooden shelves. If wooden shelves are used they should be specially treated and sealed to withstand fire and wood eating insects. Records of archival value should be stored on powder coated or baked enamel metal shelves or plan cabinets. These are anti corrosive and the enamel prevents rust and scratching. [16]

In addition, the practical suitability of the shelving or cabinets for the record type should be considered. For example, shelving or cabinets for magnetic media should not be magnetised. Glass negatives should not be stored on mobile shelving, as they can be dislodged by the movement. Large records, such as large volumes should be stored on shelving of the same width to prevent records jutting out into the aisles and to provide support for the records. Maps and plans should be stored in cabinets designed for their format.

See the list of *Archives Advice* leaflets at [Appendix 1](#) for more information on shelving requirements for different formats.

Clean and in a good state of repair

All shelving, racking and cabinets should be clean and well maintained. See Section [3.7 Maintenance and monitoring](#).

Strong enough to carry potential loads

As stated previously, the floor must be able to carry the weight of fully loaded shelving. In addition, the shelving itself must be strong enough to prevent breakages or accidents that might damage the records. If an excessively heavy load is being borne, a second shelf immediately below that on which the records rest may assist in bearing the load. Shelves should be easily adjustable and held firmly in place by clips recommended by the manufacturer.

In addition, shelving should be raised off the floor by 85-150mm as a disaster precaution and to facilitate cleaning and air circulation, and shelving should be lockable if it is to hold sensitive records. See Section [3.2.3 Extra security for records with security restriction](#).

Note: It is not acceptable to use old rusty shelving that does not fully or adequately support the weight of the records.

Arrangement

If the organisation is planning a storage area and requires additional guidance on its arrangement, the following should be considered:

- extra shelves should be provided for sorting newly received records and returned retrievals so that aisles and corridors are free of material awaiting placement on or return to shelves
- there should be 500mm between the top shelf and fire sprinkler heads to reduce the likelihood of staff accidentally activating sprinklers
- there should be 50mm between the top of the highest container on the shelf and the base of the shelf above to promote air circulation and ease of removal
- there should be 450mm between walls and rows of shelving to allow air circulation
- records should not be stored against external walls, where the risk of dampness is greater
- there should be no 'dead end' aisles between the shelves so that people are not trapped in aisles, and
- very long rows should be avoided. For example, 15 metre runs should be divided by a central aisle. This will allow easier access to the records and will enable staff to exit quickly in an emergency. [\[17\]](#)

Aisle space should be calculated to allow for shelving or access equipment and for staff who may be working in the area. [\[18\]](#)

3.4.2 Equipment

Equipment, like ladders, stools, fork lifts, hydraulic lifts, should be provided as required in the records facility to promote the safe handling of records.

The equipment provided should be:

- suitable for the task for which it is used
- adequate for staff to safely carry out their duties
- strong enough to carry potential loads, and
- clean and in good condition.

Note: Equipment which does not promote access, or which causes damage to the records, is inappropriate.

All pieces of mechanical apparatus should have emergency stopping devices. Any electrically operated trolleys should carry a portable fire extinguisher of a type approved for electrical equipment. [\[19\]](#)

Trolleys should be well constructed and fitted with rubber tyres and bumpers. They should be easily manoeuvrable and should remain horizontal without tilting on their wheels. Records should not be able to fall off the trolleys when they are properly loaded. [\[20\]](#)

3.4.3 Item containers

Item containers include wrappings, envelopes, boxes or other enclosures. Item containers should be:

Appropriate for the record's retention and format

Ideally, if records are appraised at the point of creation they can be put into the most appropriate containers for their retention from the time they are created. For example, strong clean containers are suitable for short term temporary paper records, but long term records should be created using archival quality products and stored in archival or permanent quality acid free file covers, folders or envelopes and/or acid free boxes. See Section [2.3 The continuum approach](#).

If the wrong containers are used for records of long term value, they can detrimentally affect the records. For example, over time, acidic wrappings will transmit acidity to the records causing them to break down. Packaging materials made from poly vinyl chloride (PVC) contains plasticisers which affect the resin binders in photocopier and laser printer toners and cause the toners to transfer from one surface to another. [21] Polypropylene, uncoated polyester (mylar) and polyethylene, therefore, are better choices for long term records as they will not cause this to happen.

Details regarding suitable item containers for formats and retention periods are given at [Appendix A](#) and [Appendix B](#) in the [Standard on the Physical Storage of State Records](#) and in the list of *Archives Advice*s at [Appendix 1](#). In addition, see [RIB 22: Selecting appropriate paper for the creation of records](#). If public offices have additional questions on the adequacy of materials, they should contact State Records for advice.

In good condition

All containers should be of durable material, capable of sustaining expected use and the correct size and shape for the shelving on which they are stored. See the National Archives of Australia's *Archives Advice* leaflets at [Appendix 1](#) for advice about suitable containers.

One of the main ways records are stored, when they are not used as frequently, is in boxes. Boxes should have well fitting (preferably attached) lids so that they can fully protect the contents. Ready made boxes in a variety of sizes can be obtained from many archival institutions, like State Records.

The correct size for the records they contain

Records should be boxed according to their size. If the container is too large the records may be damaged when being moved or in transit, and the records storage space may be used inefficiently. Containers that are too large can also cause occupational health and safety problems. See Section 3.5 *Occupational Health and Safety*. Records should not be forced into containers that are too small or too full.

[16] Ellis, Judith editor, *Keeping Archives*, 2nd edition, Thorpe in association with the Australian Society of Archivists, Melbourne, 1993, p.54.

[17] ISO/CD 11799, *op.cit.*, Cl.6.6.

[18] For more information about standards for mobile shelving, consult Australian Archives and Standards Australia and Standards New Zealand, *Guidelines for Mobile Shelving for Archives, Libraries and Museums*, Commonwealth of Australia and Standards Australia, 1997.

[19] BS 5454 , *op.cit.*, p.8.

[20] *ibid.*, p.18.

[21] Ling, *op.cit.*, p.120.

3.5 Occupational health and safety

[3.5.1 A safe workplace](#)

[3.5.2 Buildings and storage areas](#)

The NSW public sector is bound by the *Occupational Health and Safety Act 1983* which sets requirements for providing a safe and health workplace. These requirements are applicable to records storage areas and buildings. All NSW workplaces are also expected to comply with *Manual Handling*, the National Standard NOHSC: 1001 and National Code of Best Practice NOHSC: 2005 published by Worksafe Australia in 1990 (available from Worksafe). Action should be taken to ensure that records storage areas and facilities comply with occupational health and safety requirements.

3.5.1 A safe workplace

Safety should be promoted as an issue of importance for the organisation. Employers have the responsibility to identify and eliminate any potential risks. They should work with occupational health and safety committees in the organisation to:

- promote regular inspections of the premises, storage areas and equipment, and subsequently eliminate hazards identified. See Section [3.6 Protection from disaster](#) and Section [3.7 Maintenance and monitoring](#), and
- encourage staff to report hazards as they observe them.

3.5.2 Buildings and storage areas

In order to provide a safe and efficient work place, buildings used to store records or storage areas within buildings should be kept free from obstacles which may cause injury or impede operations. Any structural obstacle that may cause inconvenience or accident should be assessed and controlled. For example, uneven floor, pillars, shelving that juts out and low light fittings could be hazardous and therefore needs to be examined and treated appropriately. The design of the facility should provide an area for sorting new records received and returned retrievals so that aisles and corridors are not blocked by this or any other material.

Rules for records storage areas should include:

- taking immediate action to remove any movable obstacles when observed
- placing records immediately on shelves or other storage equipment so that piles of boxes do not obstruct passageways, and
- removing waste.

Regular cleaning and maintenance of storage facilities should reduce many of the occupational health and safety problems in the workplace. See Section [3.7 Maintenance and monitoring](#).

Environmental conditions

It is recommended that office conditions are maintained at around 20°C to 26°C and 40-60% relative humidity. [\[22\]](#) Recommended temperature and humidity levels for paper based records are similar to these ranges so there should not be conflict. Ventilation and air filtration is also recommended for health and safety in the office.

While light level in excess of 240 lux is harmful to records in most formats, sufficient light levels in work areas are necessary to eliminate eyestrain and other work related illnesses, and to prevent accidents. Suitable light levels based on Australian Standard AS 1680—1990, *Interior lighting* are:

- general background 200 lux
- routine office work 400 lux, and
- work with poor contrast (proof reading) 600 lux. [\[23\]](#)

These requirements may be met by physically separating work areas, such as sorting and dispatch, from the storage areas.

Shelving and equipment

Shelving and equipment should be assessed for its suitability for records storage and for occupational health and safety requirements. See Section [3.4.1 Shelving and cabinets](#). Suitable shelving arrangements and sufficient equipment should be provided to ensure that staff can accomplish their work efficiently without taking safety risks or suffering from undue fatigue.

Any free standing fittings should be completely stable. Securing shelving to the wall or floor may improve stability. If shelving is powered (for example, electric mobile shelving) safety devices should be fitted. Filing cabinets should not open into aisles and should never be left with drawers open. For stability, shelving should be loaded from the bottom and should feature stabilisers if the height to depth ratio causes problems. [24] Mobile equipment such as trolleys and ladders should not be left in locations that could cause injury.

Staff should be trained to ensure they know the correct way to operate shelving and equipment, without compromising themselves or the safety of their colleagues. This may involve staff attending formal courses. Staff should also receive on-the-job instructions on safe practices and the use of equipment. Supervisors should be vigilant in consulting with staff and monitoring and reviewing practices. In addition, warning notices should be displayed where necessary in storage areas.

Containers

Records storage containers should be small enough so that the weight each contains is minimised and should facilitate easy gripping. Boxes recommended by State Records and the National Archives of Australia are designed to minimise weight problems and ease of lifting.

The National Standard NOHSC: 1001 and National Code of Best Practice NOHSC: 2005 recommend that each potential hazard should be assessed and controlled. This also applies to lifting practices. For example, if a staff member is required to lift a box of records, they should assess the box to see if it is of a weight that they can easily lift without assistance. If the box is assessed as too heavy, or unevenly packed, the assistance of other people or moving equipment may be required. If the staff member(s) is unable to move the box without resorting to twisting or other unsuitable movements, then other methods should be explored, such as the use of handling equipment.

The standard and code of best practice also recommend that it is important to assess the frequency of movement. For example, if the staff member is lifting one box, it may not cause problems. However, if they are required to move one thousand boxes, the frequency of movement needs to form part of the assessment. Again, team lifting or handling equipment may be required. In addition, breaks need to be factored into the work planning.

The burden of lifting should be considered when designing the configuration of the shelving and other storage equipment. For example:

- the most used records should be placed closer to research areas so that less movement is required
- the heaviest and most often moved records should be around waist level for the average person
- records used less frequently should be placed at a height that is between the knees and shoulders of the average person
- light weight and rarely accessed records can be placed above shoulder height or below knee height of the average person, and
- materials and equipment should be arranged so that awkward movements such as twisting of the back are not required.

Protective clothing

The recommended records storage environment is clean, cool and pest free. However there may be occasions when staff are required to move or treat dusty or mould affected records. Persons who suffer from upper respiratory allergies should not be requested to handle excessively dusty or mould affected records. Staff should be provided with protective clothing that complies with occupational health and safety regulations relevant to the task. Protective clothing may include:

- protective outer garments such as dustcoats
- gloves
- appropriate dust masks with at least two straps, and/or
- boots.

Untrained staff should never be required to deal with hazardous chemicals for the treatment or conservation of records. Such work should be performed by a trained conservator.

Staff

The risk of threat or assault of records staff is minimal in comparison with other professions. Incidents should be reported in a structured way by using an incident reporting process that includes documenting the incident. Opening and closing procedures for buildings where records are housed should aim to reduce the vulnerability of staff.

[22] WorkCover Authority, *Health and Safety in the Office*, NSW Government, 1993, p.7. AS 1837—1976 *Code Of Practice For The Application Of Ergonomics To Factory And Office Work* recommends a temp of 21-24°C in summer.

[23] *ibid.*, p.11.

[24] BS 5454, *op.cit.*, Cl..9.

3.6 Protection from disaster

3.6.1 Components of disaster management programs

3.6.2 Pest control

3.6.3 Fire prevention and suppression

It is very likely that at some stage organisations will be affected by a disaster. At best it might cause a little inconvenience, at worst it might destroy buildings, put the organisation out of business for a considerable length of time, and cause severe financial loss and embarrassment. Disasters can also have lasting secondary effects: on staff, clients, suppliers, other organisations and the public. Due to the importance of records, their loss in a disaster can be crippling for the organisation. Disasters affecting records may include:

- natural events such as earthquakes, cyclones, bushfires, floods, vermin
- structural or building failure such as malfunctioning sprinklers, heating or air conditioning systems, leaks in roofs
- industrial accidents such as nuclear or chemical spills
- technological disasters such as viruses and computer equipment failures, and
- criminal behaviour such as theft, arson, espionage, vandalism, riots, terrorism and war. [25]

Disasters may also be caused by storage conditions that are unsuitable for the media stored, and by the natural decay of materials. [26]

NSW public offices are required to develop a counter disaster strategy for records and recordkeeping systems. The establishment and maintenance of a disaster management program will ensure that many of these disasters are averted, saving the organisation valuable time and money. For more information see the [Standard on Counter Disaster Strategies for Records and Recordkeeping Systems](#). Should a minor or major disaster still befall the organisation or storage facility, the program will enable staff to know how to react and will ensure that they have access to adequate materials for initial response. Those with specialised skills who can assist can also be easily identified and quickly contacted. In this way, the

organisation will be able to save valuable records and resume normal business as soon as possible.

Disaster planning may form part of business continuity planning (BCP) in an organisation, providing all requirements of records are considered, whatever their format. [\[27\]](#)

State Records particularly recommends that disaster management strategies for records include protection measures against pests and fire.

3.6.1 Components of disaster management programs

Disaster management programs should be established for all buildings and areas where records are stored. They should be developed to meet the specific requirements of the organisation.

It is essential that the disaster management program has the full support and endorsement of the organisation's executive management as it will require significant staff time and resources to be effective. [\[28\]](#)

The program should cover the following areas:

Prevention

Prevention includes reducing the probability of a disaster and the probability of loss if a disaster does occur.

The most important aspect of prevention is the risk management study. Risk management exercises can determine what risks to records are present and what treatment and protection measures might be required. They can also determine the size and complexity of the disaster management program itself (which is, in effect, a treatment measure).

Other preventative action may include:

- having a good records management program in place to mitigate disasters like legal disputes caused by unauthorised destruction or loss [\[29\]](#)
- establishing vital records programs to protect records essential to the organisation, and
- planning for business continuity during a disaster.

There are also practical prevention techniques like ensuring that valuable material is placed on upper shelves to avoid water damage, or in fire proof vaults to avoid fire damage.

Preparedness

Preparedness involves developing a disaster management plan (counter-disaster plan) and keeping it current. A disaster recovery plan is simply a 'clear, comprehensive, written, step by step building specific plan for disaster recovery.' [\[30\]](#) It will examine the most likely disasters that have high consequences for the organisation.

Plans should include:

- a policy statement
- the responsibilities of staff
- steps for preparedness
- steps for response
- steps for recovery, and
- simple technical information on handling and salvage.

The plan should specify all information necessary to assess the damage, stabilise and secure the situation and institute resumption/continuity measures. For example, the plan should include contact details for:

- emergency services and hospitals
- response and recovery team members
- alternative site providers

- equipment and material suppliers
- media contacts, and
- disaster recovery vendors.

It should also contain insurance arrangements and information on priorities for salvage, building plans to assist in recovery, details of emergency funding arrangements and proformas that can be used to document the recovery effort. As large disaster plans tend to go out of date quickly or remain unread, an organisation may also consider the value of issuing the most important instructions, such as reactions to bomb threats or fire alarms, on double sided cards at regular intervals. However, the existence of emergency control procedures such as these should not be seen as a **replacement** for a full disaster plan, but merely as an **addition** to them. [\[31\]](#) There are generic plans on the market which may reduce compilation time but, if used, these should be tailored to the organisation's particular situation.

Training and testing

All staff who are to be involved in responding to or recovering from a disaster should be given training before the event to ensure they react appropriately. Plans should be tested regularly, using disaster simulations if possible, and the plan amended when deficiencies are found.

To ensure the plan is tested and updated regularly, the organisation's disaster management team should meet on a regular basis. Ongoing tasks should be to:

- appoint new members to the team should any have left the organisation or be otherwise unavailable
- monitor the contacts to see that all of the information is current
- make adjustments to the plan to cope with changes in the organisation. For example, the plan will need to change if the organisation is moving premises or making alterations to existing ones, introducing new systems, relocating parts of the collection, storing records on new media, changing locks and security systems
- discuss new threats to the records
- assess the adequacy of the disaster control equipment
- check the entire building for risks
- call occasional drills, and
- continue to promote the plan in staff meetings and training programs at all levels.

On site supplies

Preparedness also involves maintaining onsite supplies. For example, disaster bins can be kept at strategic points in the building. Disaster bins contain paper towelling, plastic sheeting, torches and similar supplies that may be required in a disaster. [\[32\]](#)

Reaction/Response

Reaction or response involves implementing the procedures when the disaster occurs such as:

- raising the alarm and assembling personnel
- setting up a central area of control
- assembling resources and allocating tasks
- assessing and documenting the damage and making initial improvements
- initiating security measures, and
- initiating contingency arrangements.

Recovery

The recovery component of the disaster management program involves restoring the site and damaged materials to stable and useable conditions.

This includes:

- stabilising the situation
- salvaging and conserving materials
- cleaning the site and making the building habitable and environmentally sound again
- restarting equipment, processes and systems
- reshelving restored or replaced materials, and
- analysing the response, reviewing and updating the counter disaster plan.

In recent years some commercial suppliers of comprehensive disaster recovery services have emerged. These suppliers often offer services like recovering data from damaged computers, cleaning of water and smoke affected areas, and conservation of water or fire damaged materials. These services may provide organisations with practical assistance, but are not a substitute for systematic planning. See [RIB 7 Counter disaster management for records: services and advice](#).

For more information regarding disaster management and risk management see the [Guidelines on Counter Disaster Strategies for Records and Recordkeeping Systems](#).

3.6.2 Pest control

It is highly recommended that disaster management protection measures for records include pest control.

Insects and vermin

Insects and other vermin must be eliminated from storage areas. Pests include termites, cockroaches, spiders, silverfish, paper lice, rats and mice. The following 'passive' means will assist in achieving pest control:

- maintaining a cool, dry, ventilated, clean environment
- adopting rules which prevent the accumulation of rubbish or food in the storage area. This deprives the pests of the conditions in which they thrive
- carefully selecting furnishing materials and floor coverings to exclude those that attract insects
- configuring the shelving so that the bottom shelf is 85-150cm from the floor to enable cleaning and air circulation, and/or
- designing the storage operation so that records are inspected for infestation before they come into contact with records already in storage.

These passive methods assist greatly, but active measures are also required.

These should include:

- conducting a pest inspection prior to the selection of a site whether a building, a room or section of a room for records storage
- regularly inspecting the site for vermin (see Section [3.7 Maintenance and monitoring](#))
- using simple methods of pest control like traps and baits, and/or
- contacting a pest control agency if pests are detected and are not eliminated by traps and other simple means.

If organisations are concerned about health risks involved with insect treatments they should inquire which chemicals are used and obtain *Material Safety Data Sheets* from Workcover concerning the products. Staff concerns may be allayed by refraining from spraying office areas unless there is a particular need, and isolating treated areas for up to four hours after the treatment.

It is essential to see that pest control agencies spray **near** the records, but not **on** them. It may be necessary to supervise the work. All staff and visitors should be notified if fumigants are to be used to ensure that they do not go into unsafe areas or come into contact with contaminated surfaces. All affected air conditioning systems and very early smoke detection devices (VESDA) should be shut down while fumigation takes place. [\[33\]](#)

Mould

Mould is a type of fungus and is perhaps the most serious pest which can affect records collections because it spreads rapidly and can destroy the records it attacks. There is high potential for mould growth once the humidity exceeds 60%. Every attempt must therefore be made to keep humidity below this level and provide good ventilation in the storage areas.

Signs of mould include brown marks, furry stains and a musty odour. Records with mould should be isolated from the regular storage areas as the spores spread easily. If mould is discovered in the storage area, the full extent of affected records must quickly be ascertained and the records isolated until they are treated. Professional assistance from pest control agencies and conservators must be sought.

3.6.3 Fire prevention and suppression

The prime danger to records is often fire. Therefore an important protection factor that should be considered in disaster management programs is the implementation of fire prevention and suppression measures.

Risk assessments should include examination of the likelihood of fire spreading through buildings and storage areas and the risks from adjacent premises and activities. Hazards like smoking, old wiring, and the unnecessary storage of flammable materials should be eliminated. It is also desirable to acquaint the local fire brigade with the nature of the building and its contents to reduce damage in the event of a fire.

State Records recommends that, at the very minimum, the organisation should install heat/smoke detection devices and fire alarms and have fire extinguishers available in storage areas. Sprinklers are also recommended but, as they are expensive to install, they are only mandatory when buildings or storage areas are to be constructed or substantially renovated. See below for more information. Consultants or officers in the organisation with responsibility for fire prevention and suppression measures should be consulted.

Fire detection system

There should be some form of fire detection in every building where records are stored (such as alarms, smoke detectors).

In buildings devoted to records storage, parts of the building should be provided with a fire detection system connected to a central monitoring panel. The system should respond automatically to smoke or other products of combustion. [\[34\]](#) The detection system should include:

- a local warning at the control panel and/or repeater panels
- operation of plant shut down, such as air conditioning or heating systems
- automatic transmission of a warning to the local fire brigade or alarm station, and
- general fire alarm warning throughout the building.

Personnel should be able to monitor all components and the status of the system at the central control panel. Panels should be located in a convenient, central location which is constantly attended. [\[35\]](#)

Fire alarms

Buildings containing records should be protected by fire alarms, which may form part of a fire detection system as described in Section [3.6.3 Fire prevention and suppression](#). The alarms must be sufficiently loud to be heard in all parts of the building. See Section [3.7 Maintenance and monitoring](#) for servicing information.

Smoke or heat detectors

Records facilities should be fitted with smoke or heat detectors in order to ensure that rapid action is taken in the event of a fire. Simple smoke detectors for small records storage areas can be purchased from supermarkets or hardware stores and from some local fire stations for minimal cost. Ideally, very early smoke detection apparatus [VESDA] can be installed.

Fire extinguishers

It is essential that hand-held fire extinguishers are placed strategically in storage areas. Carbon Dioxide [CO₂], or FM200™ or NAFIII are the most suitable for use or near records. However, in spite of the damage they can do, it is preferable to have water fire extinguishers than no immediate means of extinguishing a blaze in a records facility. Hand held fire extinguishers should be serviced annually and refilled as necessary.

Fire hoses

Fire hoses may be placed as required in the building, usually in common areas such as corridors. The hoses should be long enough to reach the most remote parts of the building if required. The hoses should be inspected regularly to ensure that they are in good condition should they be required.

Hydrant systems or rising mains should be installed in buildings more than 30 metres in height or where a single floor exceeds 1000 square metres. [\[36\]](#)

Sprinklers

If possible, records facilities should be fitted with sprinklers. This is a mandatory requirement when new buildings or records storage areas are being constructed, or when substantial renovation is taking place. Damage which may occur from accidental activation of the sprinklers and by the sheer quantity of water exuded in a genuine emergency may be minimised by:

- zoning sprinklers. This ensures that only the sprinklers in the immediate area are activated in the event of fire
- selecting 'on/off' sprinklers which cease to operate once the heat in the area has been reduced
- selecting dry sprinklers where the pipes are filled with compressed air and only fill with water when the alarm is activated. These are useful in areas where water may freeze in the pipes, or
- using 'fine mist spray' or 'water mist' sprinklers which produce less moisture than water sprinklers.

When water-based sprinklers are installed there should be adequate drainage that does not endanger other areas.

Records of continuing value, computer discs and tapes and audio-visual media can be protected by gaseous sprinkler systems in accordance with Australian Standard AS 4214/1-5 *Gaseous Fire Extinguishers*. Those which conform to government regulations and accepted standards include Inergen, FM200 and NAFIII. Halon gas systems are no longer legal due to its undesirable ecological effects. Gas systems should only be used in airtight compartments. [\[37\]](#)

Carbon dioxide sprinklers are not recommended for work areas owing to the speed of air saturation and the fact that carbon dioxide is lethal in high concentrations.

Training in the use of fire protection equipment

Staff should be trained in the use of all fire protection equipment and life support systems and ideally receive practical experience by using them on a regular basis. It is important that there is sufficient expertise in the agency that, when staff are on leave or when there is staff turnover, sufficient expertise remains to use all of the fire protection and life support systems if necessary.

[\[25\]](#) V.A. Jones and K.E. Keyes, *Emergency Management for Records and Information Programs*. ARMA International, Kansas, 1997, p.3-4.

- [26] A. Howell, H. Mansell and M. Roubos-Bennett (Compilers), *Redefining disasters: A decade of counter disaster planning, proceedings of a conference held Wednesday 20 - Friday 22 September 1995, State Library of NSW, Sydney, Australia*, State Library of New South Wales, Sydney, 1996, p.21.
- [27] *ibid.*, p.17.
- [28] See [Guidance for Senior Management on Disaster Management for Records](#).
- [29] See AS 4390 and State Records' [Standard on Records Management Programs](#) for more information about sound records management practices.
- [30] Jeavons Baillie, Judith Doig, Cathis Jilovsky (ed.), *Disaster in Libraries: Prevention and Control*. Second edition, Cooperative Action by Victorian Academic Libraries Limited, Melbourne, 1994, p.22.
- [31] Stephen Yorke, 'Coping with disasters: Strategies for the Records Manager,' *Informaa Quarterly*, May 1997, p.17.
- [32] Disaster bins and their contents can be purchased from Q stores, a division of Public Works and Services, PO Box 77 Alexandria, telephone: 1800 424 613.
- [33] Ling, *op.cit.*, p.99.
- [34] *ibid.*, p.5 and ISO CD/11799/2, *op.cit.*, Cl.6.2.
- [35] ISO CD/11799/2, *loc cit.*
- [36] *ibid.*, Cl.6.3.
- [37] Ling, *op.cit.*, p.57; ISO CD 11799/2, *loc.cit.*
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3.7 Maintenance and monitoring

[3.7.1 Inspections](#)

[3.7.2 Record inspections](#)

Buildings and storage areas should be regularly monitored in order to maintain a stable, protective environment for records. A program should be established whereby the building, temperature and humidity, air quality and light in storage areas are monitored, pests are controlled, fire protection and safety equipment is periodically checked, disaster management programs are updated and the presence of magnetic fields are monitored.

The records themselves should also be monitored for signs of deterioration. If problems are detected, conservation treatment may be required.

The building, equipment and services should always be maintained to approved standards, legislation and building codes. The *Building Code of Australia* is a handy reference source. If contractors are used for building maintenance the contract should include provision for the factors listed below and the contractor's performance assessed regularly.

3.7.1 Inspections

Inspections should be undertaken on a regular basis. Depending on the organisation, this may be undertaken in association with occupational health and safety inspections. See Section [3.5 Occupational health and safety](#).

Any risks found should be either removed or managed as part of disaster management programs. Disaster management programs should be reviewed regularly. See Section [3.6 Protection from disaster](#).

Note: It is not acceptable to establish a building or storage area for records and then fail to maintain and monitor it.

Inspections should include the following.

Buildings and storage areas

Monitoring of the building's exterior includes regularly inspecting the building and its surrounds. Things to particularly look out for are:

- cracks in walls
- signs of water leaks, spillages, blockages in drains, roofs or gutters
- signs of pest infestation

- signs of damage or unlawful entry, such as vandalism or broken windows, and
- signs of new risks.

Regular inspections should also be made of the building's interior and storage areas to ensure that there are none of the above. All risks or problems should be fixed or managed as part of the organisation's disaster management programs.

See Section [3.6 Protection from disaster](#).

Security

Monitoring and maintenance of security measures may involve checking and assessing alarms, motion detectors, cameras, surveillance equipment, locks and other access controls and checking for new security risks. Measures may need to be taken if there are problems. For example, if an alarm is temporarily disabled, the organisation may wish to employ a guard or a regular patrol until the alarm is repaired.

If security firms are used, their performance should be monitored and, if unsatisfactory, a plan for improvement or the replacement of the firm considered. Difficulties may include slow responses to alarms and irregular patrols.

Environmental conditions

The storage area should be inspected regularly to identify changes in the environment, such as perceptible temperature and humidity fluctuations. Inspections should increase if an irregularity is discovered or if there have been natural threats, such as severe storms or high winds. Attempts must be made to bring temperature and humidity in line with the acceptable levels outlined in Section [3.3 Environmental conditions](#).

Measures to combat temperature and humidity fluctuations may include installing insulation, improving the building so it is sealed, and using fans or heaters. Areas can be dehumidified by using portable dehumidifiers or moisture absorbing crystals, although conservation advice may be required to ensure they are used correctly. [\[38\]](#) If the problem persists it may be necessary to remove the records. If the collection includes records of continuing value, vital records, computer disks and tapes or large quantities of audio visual material, aids may be necessary to monitor the environment. These may include:

- whirling hygrometers, also known as psychrometers, which may be used for regular monitoring programs and more intensively when there is concern about environmental conditions. The advantages of these devices are that they are accurate, easily portable and less expensive than thermohygrographs.
- thermohygrographs, sometimes known as hygrothermographs. The main advantage of these machines is that they record temperature and humidity levels **continuously**, allowing the stability of the environment to be assessed. They indicate patterns of the environmental control. A further advantage is that they produce hard-copy charts which can be retained as a permanent record of performance, and they provide the basis of diagnosing problems with air conditioning equipment. They are delicate scientific instruments which need to be treated carefully and they require recalibrating occasionally, particularly when they are moved. These machines are expensive to purchase although they may be sometimes obtained by hire from larger archives and museums.
- building management systems (BMS). These electronic programs may be a feature of modern buildings and monitor vital elements such as temperature and humidity, security, fire protection, lighting and air quality. If needed, conditions may be monitored from remote locations. Purpose-built repositories, especially those which are intended for a large proportion of records of long term and continuing value, should investigate building management systems.

- data loggers. These are compact temperature and humidity monitors which print readings out onto graphs. Information can be downloaded to a PC. These tend to be cheaper than thermohygrographs.
- hand held probes and recorders. [\[39\]](#)

Air conditioning systems must also be regularly monitored and maintained to ensure that they are performing correctly. Checks should include all aspects of the unit. [\[40\]](#) A regular program of changing filters should be established to control the air quality. Air conditioners also need to be cleaned regularly. Maintenance of lights should involve checking light globes to ensure they are working correctly. The light level may be measured by a luxmetre or by a building management system (see above). Luxmetres are expensive to purchase and difficult to use, however, so only organisations with large collections of records of long term value should be concerned with measuring light intensity.

Shelving equipment and containers

Staff should also examine the components of storage areas. Manual shelving may require some maintenance work, for example, the replacement of operating handles. If shelving is electrically operated, the motors will need to be maintained regularly. [\[41\]](#)

Equipment, such as trolleys and ladders, will also require monitoring and maintenance to ensure they are maintained in good condition. Any faulty shelving or equipment that cannot be adequately maintained should be replaced.

In the interests of safety and convenience of the employees and of good management, damaged containers should be replaced promptly. The records will then remain protected.

Pests

Inspections should monitor the presence of pests. Darker and warmer sections of the storage area in particular should be inspected regularly. If baits, powders and/or sprays have been used, their effectiveness should be monitored. See also Section [3.6.2 Pest control](#).

Fire prevention and suppression

Part of the inspection process for buildings and storage areas should be to check fire prevention and suppression mechanisms. In some organisations the occupational health and safety committee may undertake this activity. Inspections should include examination of:

- exits to ensure they are free of obstacles
- fire extinguishers to ensure they are in position, labelled and fully operational
- storage areas to ensure that combustible materials, such as chemicals or cellulose nitrate film, are not present
- sprinklers to ensure they are fully operational, and
- electrical wiring for signs of deterioration.

Part of the maintenance and monitoring process should also be ensuring that staff skills in fire prevention and suppression are up to date.

There are a number of Australian standards that may assist in the maintenance of fire equipment, including:

- AS 1851.1-11—1981-97, *Maintenance of Fire Protection Equipment*, and
- AS 3676—1989 *Portable Fire Extinguishers – Guide to Servicing*.

Formal fire inspections, involving a fire safety expert, should also be undertaken at least at three yearly intervals.

Cleanliness

Inspections should monitor the effectiveness of cleaning operations. As dust can cause damage through abrasive action, and can encourage mould spores and pests, buildings, storage areas and shelving should be cleaned on a regular basis. Storage facilities housing records of continuing value, vital records, computer disks or tapes or large quantities of audio visual records should be regularly cleaned with a vacuum cleaner, preferably fitted with a High Efficiency Particulate Air Filtration (HEPA) filter. These filters are readily available and can be attached to standard vacuum cleaners.

Cleaning agents should not harm the materials stored. Agents containing ammonia and bleaches should be avoided as the vapours they give off can cause paper to oxidate, leaving brown marks. Some environmentally friendly cleaners may be used if they are not too strong. Alternatively water, or water and vinegar solutions can be used.

3.7.2 Records inspections

Regular inspections should also be made of the records themselves. Records can be monitored for signs of:

- infestation by insects or vermin
- mould
- dust
- corrosion
- damage, such as rips and tears, or
- other forms of deterioration.

Staff and users should also be encouraged to report the existence of any of the above factors.

Maintenance and repairs to records

Regular maintenance of records should be conducted. For example, with long term paper files, maintenance includes replacing damaged file covers, checking that inappropriate papers such as post-it notes and thermal fax paper have not been added to the file and removing rusty pins and paperclips from documents. See the list of *Archives Advice* leaflets at [Appendix 1](#) for more information about maintaining particular formats.

Temporary repairs should only be made if they are reversible and if they are not likely to damage the records further.

Conservators, archivists and librarians have knowledge and experience in conservation matters, and are often willing to advise clients on best practice. State Records, the National Archives of Australia, the Australian Museum, art galleries, libraries and archives, and larger public and university libraries are just some of the institutions that can be contacted.

In addition there are national and international standards on the care and storage of records, as well as many studies, reports and books (see [bibliography](#)). Major repairs or repairs to important or valuable records should be carried out by a trained conservator.

Keeping a maintenance record

Documentation should be kept of all inspections, and preventative and repair work undertaken. If maintenance is part of a contract, contractors should report on surveys and work undertaken for maintenance. This paperwork should reside with the organisation to show that the contractor is meeting their obligations and that the organisation is meeting its requirements. [\[42\]](#)

[\[38\]](#) Ling, *ibid.*, p.115.

[\[39\]](#) *Loc.cit.*

[\[40\]](#) AS/NZS 3666.2—1995, *Air handling and Water Systems of Buildings – Inspection and Maintenance* can be consulted here.

[\[41\]](#) Ling, *op.cit.*, 94

[\[42\]](#) *Loc.cit.*

3.8 Handling and use of records

[3.8.1 Guidance for handling and use](#)

[3.8.2 Handling records in transit](#)

[3.8.3 Records temporarily out of custody](#)

[3.8.4 Records of long term or archival value](#)

[3.8.5 Conversion to other formats](#)

Records in all formats are likely to deteriorate if they are not treated correctly. Steps must be taken to promote the correct handling, use and transport of records to minimise damage and ensure their preservation for as long as they are required.

3.8.1 Guidance for handling and use

There are general, common-sense rules for the handling and use of records that need to be promulgated to staff and contractors.

Only authorised users should be able to access records. See Section [3.2 Security](#) for physical measures to restrict access. See Section [3.9.5 Policies and procedures for access](#) for recommendations on how to decide who has access.

The following practices should be forbidden in or near records and records storage areas:

- smoking, as this encourages airborne pollutants and, at worst, fire
- eating as grease and food particles may collect on records, attracting vermin and insects, and
- drinking, as there is a risk that spillage may occur.

Handling for particular formats

Particular formats require particular handling techniques. The techniques for handling the formats in the agency should be known and promulgated to all staff. See [Recordkeeping in Brief 14: Handle with Care](#) for more information on handling.

This information may be communicated in a number of ways including:

- briefings, seminars or workshops
- induction sessions with new staff
- the issue of information sheets
- displaying posters illustrating 'dos and don'ts' of records handling, or
- monitoring handling and use and correcting it when necessary.

3.8.2 Handling records in transit

Good handling procedures are required for records in transit to ensure they are secured and protected at all times against weather, light, pollution, unauthorised access, theft and other dangers. See [Recordkeeping in Brief 15: Records in Transit](#) for more information.

3.8.3 Records temporarily out of custody

Generally public offices should not allow records out of their custody. However, sometimes there are legitimate reasons when records need to be transferred to other public offices or organisations for short periods of time. For example, records may need to be presented in court or used on building sites by construction engineers.

In some cases copies or certified copies may be sent instead of originals. If originals must be sent and there is some concern that they may be damaged or rearranged when offsite, the public office may also wish to take copies and keep the copies as a point of comparison when the records are returned. Alternatively

the public office may wish to take measures like folio numbering the pages of files.

If originals are sent, it is the public office's responsibility to inform the temporary custodian of the need for records protection and security. For example, organisations can send an information sheet, like that reproduced at Appendix 2, with the records. If any damage is done to the records while they are with the temporary custodian the public office should be informed and take appropriate action. When the records are delivered back to the public office they should be inspected before being returned to the collection.

3.8.4 Records of long term or archival value

Records of long term value, including those records under 'still in use' determinations, require particular handling techniques to ensure their survival. Examples of precautions that can be taken include:

- establishing a policy whereby records are only referred to in an area designated for research where their usage is monitored and improper handling corrected
- establishing a policy that a copy is issued for reference purposes rather than the original
- educating and training users in the handling of long term records and archives, on an ongoing basis, or
- asking clients to sign agreement to a list of regulations, including requirements for handling and preservation requirements.

Regulations should include that:

- pencils only can be used around original records
- pages should not be bend or folded
- pages should be turned carefully to avoid tears
- pages should not be written on, leaned on, or traced from
- misfiled documents should not be rearranged by clients. They should be brought to the attention of records staff
- damaged documents should not be repaired by clients. They should be brought to the attention of records staff
- copies should be made by staff, well versed in preservation handling, and
- records staff retain the right to refuse to issue or photocopy fragile documents.

When retrieving records that have been stored in cooler environments, they should be acclimatised before use. For example, photographs taken from a storage environment of <5° C should be slowly accustomed, over a number of hours, to the temperature of the research area to prevent condensation and stress to the record.

See [Appendix 3](#) for an example of access rules.

3.8.5 Conversion to other formats

If records are to be converted to other formats, such as by microfilming, imaging or migration, care must be taken to ensure that the records are handled carefully in the conversion process. For example, if volumes are to be microfilmed, the original should not be damaged by poor handling or pressure exerted on the spine.

Records should be converted according to recognised standards, such as Australian standards, international standards or industry standards. Part of the conversion process should include checking to ensure that the copies of records are authentic, that is, that they retain the content, context and structure of the original. For further information on checking and authenticating imaged records, see [Recordkeeping in Brief 11: Digital Imaging and Recordkeeping](#).

If conversion is being done by a consultant or contractor, the contract should include stipulations that recognised standards are followed and that the work is checked regularly to ensure that copies are authentic.

3.9 Accessibility

[3.9.1 Location](#)

[3.9.2 Standards for documentation and location controls](#)

[3.9.3 Access to technology/equipment dependent records](#)

[3.9.4 Policies and procedures for access](#)

[3.9.5 Restricting access to records](#)

All possible steps should be taken to ensure that the records within a storage facility can be easily located, and accessed by authorised clients. Decisions regarding the location of the facility, its design and the location controls adopted should all be made with accessibility in mind. Documentation should also be of sufficient quality to facilitate quick retrieval. Sufficient resources should be provided to enable retrieval requirements to be met.

3.9.1 Location

The frequency and urgency of retrievals should be a consideration in choosing the site of a records facility (building or storage areas within existing buildings). See Section [3.1 Location](#) for other considerations.

In active environments, the storage area should be designed to ensure that records can be retrieved quickly and easily. Access can be facilitated by ensuring that records are not stored in inaccessible positions and installing shelving which permits easy access (for example, open bay shelving). See Section [3.4.1 Shelving and cabinets](#) for more information.

Note: It is not acceptable to have multiple boxes of paper-based files stored one on top of another, as the accessibility of the material is compromised.

The success of a secondary records storage operation is often measured by the extent to which it satisfies retrieval requests. Storage within the facility should therefore be planned carefully so that records which are most regularly retrieved are placed in a convenient position. These should be placed on equipment which permits easy access and there should not be obstacles preventing access. They should also be placed conveniently within the facility and at medium height so that they are more accessible.

Senior officers should be advised if records requested for retrieval cannot be found and every effort made to locate them.

3.9.2 Standards for documentation and location controls

The Corporate Records Manager or their delegate should establish a standard for documentation and methods for location control in order that records may be quickly and easily identified and retrieved.

Records stored by the organisation

These may include some or all of the following:

- record items (such as files, disks or tapes) should be given unique identifiers. These should be as simple as possible
- where appropriate, records should be registered into a records system

See [How to take control of your records](#) for more information on numbering and registration.

Another means to improve documentation quality and location control, and hence the accessibility of records, is to classify records using a controlled language for file titling and indexing. State Records produces *Keyword AAA: A Thesaurus of General Terms*, which classifies records according to the business functions and

activities that the records represent, and which can form the basis for an organisation's thesaurus. More information about *Keyword AAA* can be obtained from State Records' [Web site](#) or by contacting State Records directly. In addition:

- a simple numbering system should be established for rows and bays of shelving, and shelves should be clearly labelled with location symbols (for example row numbers, numbers for the range of boxes or files stored in rows). Numbering systems should not be changed or altered without a pressing reason
- containers (such as boxes) housing records should be given a unique identifier so that their location on the shelf is known
- records in containers should be arranged according to series and disposal date order
- container lists should be created detailing what items are in each container. Lists should include details like: record series, container number, item number, item title and date range of item. It is much easier to retrieve if these lists are kept in electronic format with all other container lists so that they can be searched, and
- location documentation should be updated regularly.

Commercial storage facilities

If storing with a commercial storage facility, standards for documentation quality and location controls should also be imposed for materials transferred to the facility. It is important to check with the chosen provider in case they have their own standards and controls that the organisation will need to follow. Some commercial providers offer to arrange and describe records and assign location controls for a fee. Good documentation and location control should ensure that the records may be quickly and easily identified by the organisation or by the records staff, in order to facilitate retrieval. See Section 3.10 [Commercial storage facilities](#).

These may include some or all of the following:

- containers (such as boxes) housing records should be given some form of unique identifier by the transferring organisation. The commercial facility's own numbering system may then be added to the documentation to facilitate retrieval
- records in containers should be arranged according to series and disposal date order, and
- consignment lists should accompany the records transferred detailing what items are in each container. Lists should include details like: transferring organisation and section/unit name, record series, container number, item number, item title and date range of item. Consignment lists should be provided in a format acceptable to the facility. Generally, it is best if these lists are sent in electronic form so that they can be searched. Copies of these lists, annotated with the commercial facility's location numbers, should be retained by the transferring organisation. The commercial storage facility should also issue the organisation with a receipt of transfer which is important proof of the records' location.