Maintenance Management Framework

Building Maintenance Policy, Standards and Strategy Development

Department of Housing and Public Works
The suite of *Maintenance Management Framework* documents is available online (www.hpw.qld.gov.au)


2. *Guidelines* complement the policy by giving a more detailed explanation of a subject.

3. *Policy advice notes* discuss emerging policy issues or topical maintenance matters.

**Building Maintenance Policy, Standards and Strategy Development**

Queensland Department of Housing and Public Works

*Includes minor updates as at July 2017*

(Content first published in 2004 in separate guidelines)

ISBN 978-0-9804681-5-1

© The State of Queensland

(Department of Housing and Public Works)

**Enquiries should be directed to:**

The Manager

Building Policy and Practice

Building Industry and Policy

Department of Housing and Public Works

**Telephone** 07 3008 2512

GPO Box 2457

Brisbane Qld 4001

**Email** bip@hpw.qld.gov.au
Contents

1.0 Introduction ............................................................. 2
  1.1 Scope ........................................................................ 2
  1.2 Related documents .................................................. 3
2.0 Documenting a departmental maintenance policy .................. 3
  2.1 Key elements of a maintenance policy .......................... 3
  2.2 Benefits of documenting a maintenance policy .............. 5
3.0 Determining condition standard ratings ............................ 5
  3.1 Identifying what is required of building assets ............... 5
  3.2 Assigning ratings ..................................................... 6
  3.3 Implementation of ratings ......................................... 6
  3.4 Benefits of establishing ratings .................................. 7
4.0 Preparing a maintenance strategy .................................... 7
  4.1 Key elements of a maintenance strategy ....................... 7
  4.2 Benefits of formulating a maintenance strategy .......... 9
5.0 Developing a Strategic Maintenance Plan ......................... 9
  5.1 The planning process ............................................... 9
  5.2 Key elements of a Strategic Maintenance Plan ............ 10
  5.3 Benefits of developing a Strategic Maintenance Plan ..... 11
6.0 Key success factors for maintenance establishment .......... 11
7.0 Regular review .......................................................... 12
Appendix 1: MMF Table 1 .................................................. 13
1.0 Introduction

This guideline forms part of the Maintenance Management Framework (MMF). The MMF is the whole-of-Government policy for managing building maintenance. It was approved by Executive Government on 28 June 1999 and came into effect on 1 July 1999. The second edition of the MMF policy document, incorporating enhancements resulting from a comprehensive whole-of-Government review, was approved on 17 December 2007 and further updated in December 2011.

Maintenance management process

The maintenance management process (illustrated in Diagram 1), is a generic process that can assist departments to establish appropriate practices for the maintenance of Queensland Government buildings. Its objective is to facilitate consistency in the planning and implementation of building maintenance. The maintenance management process is part of the overall asset management process.

Diagram 1 - Maintenance management process

1.1 Scope

This document provides best practice guidance regarding implementation of the first stage of the maintenance management process (see Diagram 1): maintenance establishment. This stage involves the planning and development activities associated with building maintenance and consists of four closely related processes:

- developing a departmental maintenance policy
- assigning condition standard ratings
- preparing a departmental maintenance strategy
- developing a Strategic Maintenance Plan.
1.2 Related documents

- Maintenance Management Framework (MMF policy document)
- Building Condition Assessment (MMF guideline)
- Scope of Building Maintenance (MMF policy advice note)
- Strategic Asset Management Framework - Best Practice Guidelines for the Management of Queensland Government Buildings

2.0 Documenting a departmental maintenance policy

In accordance with the MMF (policy requirement 1), departments must produce an internal maintenance policy that incorporates their service delivery objectives. A maintenance policy aims to:

- provide a clear statement of the department’s objectives for the maintenance of its building assets
- explain how these objectives support the delivery of departmental services
- identify, at a strategic and operational level, the officers and/or departmental units responsible for maintenance management, and outline the nature of these responsibilities.

2.1 Key elements of a maintenance policy

Essentially, a departmental maintenance policy should identify how, and by whom, the maintenance of the department’s building assets is to be managed. The policy should be structured to include the following components:

- a statement of the policy’s intent and objectives
- the scope of the policy
- the details of the policy (i.e. the policy requirements)
- allocation of responsibility for implementing the various policy requirements
- continuous improvement arrangements for the policy, including policy review procedures.

In the “details” section of their maintenance policy, departments should outline their approach to achieving the policy’s objectives. Departments should also explain how the maintenance policy relates to their other asset management policies and to their capital works and asset disposal programs.

The “details” section of the policy should briefly address the department’s approach to the following:

- establishment and periodic review of condition standard ratings for all building assets
- preparation of a departmental maintenance strategy incorporating a balance of planned (i.e. preventative, statutory and condition-based) maintenance and unplanned maintenance
formulation of a Strategic Maintenance Plan (SMP) that reflects the department’s maintenance needs over the immediate, medium and long term

development and implementation of a program of regular condition assessments

an assessment of maintenance demand across the department’s building portfolio

formulation of a budget based on a realistic calculation of the level of funding needed to maintain the department’s portfolio to specified condition standard ratings

production of an annual maintenance works program based on condition assessments, existing programs, historical data and the agency asset plan

procurement of maintenance services in accordance with government policy

ongoing monitoring and periodic review of maintenance performance, including the development of performance measures and their integration with other asset management performance measures

establishment of processes for the collection and utilisation of maintenance information to facilitate maintenance management and meet minimum reporting requirements

establishment of processes for the retention of technical and asset information from handover and commissioning

arrangements for the establishment of feedback loops between maintenance service providers and building planners and designers (effective feedback loops can facilitate improvements in maintainability, thereby minimising the maintenance needs of future buildings).

When drafting their maintenance policy, departments should also consider their obligations with respect to:

heritage and environmental legislation

health and safety regulations

building security

risk management

related government policy such as the Queensland Procurement Policy (in particular the requirements aimed to enhance transparency and accountability of procurement processes and outcomes; integrate the practice of sustainability into the procurement of goods, services and construction; and support the local employment opportunities for participation by competitive local suppliers)

relevant quality assurance policies.

---

1 Information about agency asset plans is provided in the Strategic Asset Management Framework guideline: Asset Planning for Buildings.
2.2 Benefits of documenting a maintenance policy

A comprehensive and clearly written maintenance policy will:

- facilitate compliance with relevant government policies and statutory requirements
- facilitate consistency in departmental maintenance activities
- promote effective maintenance management practices among departmental asset and facility managers
- support the efficient conduct of maintenance activities by service providers.

3.0 Determining condition standard ratings

The determination of condition standard ratings for building assets (in accordance with MMF policy requirement 2) is fundamental to the maintenance management process. Condition standards provide a clear statement of the level to which assets must be maintained (i.e. the “desired” condition) to meet service delivery needs.

Specifically condition standards:

- are the starting point of departmental maintenance strategies and plans
- are benchmarks against which building condition assessment results are evaluated (thus identifying the extent of any gap between “desired” and “actual” building condition)
- facilitate the analysis of “actual” condition over time (i.e. the detection, monitoring and forward-projection of trends in building condition)
- are important factors in the development of maintenance budgets and annual works programs
- ensure that, during the condition assessment process, maintenance service providers focus only on work required to bring an asset up to the specified condition (rather than unnecessarily identifying work that may exceed departmental requirements).

Determination of condition standards is generally more effective when undertaken by departmental teams involving: portfolio asset managers; facility managers; business managers; asset user representatives; and maintenance service providers.

3.1 Identifying what is required of building assets

The condition of a building asset – i.e. a building’s physical state of repair – influences its physical and functional performance. Before assigning a condition standard rating to a building asset, departments must carefully consider what they require of that asset. The process of assigning ratings should therefore begin with a review of the department’s service delivery plan.

The purpose of this review is to determine:

a. the criticality to service delivery, and
b. the required function (e.g. laboratory, heritage building, office accommodation, or a building that is no longer operational) of each building in the department’s portfolio.
3.2 Assigning ratings

Having identified their requirements for each building asset, departments must decide how they will assign condition standard ratings. When assigning ratings, departments must use the S1 to S5 rating scale set out in MMF Table 1 (reproduced in Appendix 1).

Condition standard ratings can be assigned to:

- an overall building
- element groups (e.g. superstructure, finishes, services)
- elements (e.g. roof, external walls, floor finishes, lighting, air conditioning)
- sub elements (e.g. brick walls, distribution boards, ductwork, controls).

The MMF policy advice note: Scope of Building Maintenance, provides further guidance in relation to elements (also known as “components”), sub elements, and element groupings.

The criticality of the building asset to service delivery and the complexity of its components will dictate how ratings are assigned. In the case of less complex and less critical assets (e.g. storage shed, single-room meeting hall) it may be sufficient to assign a rating to the overall building, or – if further detail needs to be specified – to particular element groups. However, more complex, critical and strategically important assets will generally have particular performance requirements that need to be specified in greater detail. In such cases, condition standards should be assigned to elements/sub elements. Furthermore, in more complex buildings, some elements may need to be maintained to a higher standard than the rest of the building. In such instances, detailed descriptions of what is meant by the S1 to S5 ratings, as they relate to these elements, should be used in communicating departments’ expectations to maintenance service providers, and in particular to condition assessors.

Proposals for asset disposal, refurbishment, or any future changes to service delivery (which affect the building function) will impact on condition standard ratings. Where assets are approaching the end of their useful/economic life, condition standard ratings must be applied accordingly.

3.3 Implementation of ratings

The approach taken to determine condition standard ratings should be outlined in the departmental maintenance policy and in any related departmental documents (e.g. asset management manuals). Once determined, condition standard ratings form the basis of instructions to the maintenance service provider regarding the level to which the department expects building assets to be maintained. For this reason, it is imperative that ratings be clearly communicated to service providers and carefully documented in procurement arrangements such as Service Level Agreements (SLAs).
Ratings will be used by the service provider within the condition assessment process to identify gaps between the desired and actual condition of buildings. Providers can then determine and report maintenance works necessary to return buildings to the desired standard. Condition standard ratings will also be referenced by service providers during the day-to-day maintenance delivery process, including delivery of unplanned works. This regular referencing will ensure that works undertaken meet – and do not exceed – the standards that have been established by the department.

### 3.4 Benefits of establishing ratings

Appropriate, detailed and well documented condition standard ratings will supply maintenance service providers with a clear statement of a department’s expectations regarding the maintenance of their building portfolio.

### 4.0 Preparing a maintenance strategy

In accordance with the MMF (policy requirement 3), departments must prepare a maintenance strategy that incorporates a balance of planned and unplanned maintenance. The primary driver for the maintenance strategy is the department’s service delivery strategy. If, for example, future directions for the service delivery strategy are changing such that a department requires different accommodation arrangements (e.g., leasing, co-location of all or some of its functions, or joint use with other departments) the maintenance strategy should be adjusted accordingly.

A maintenance strategy should be a succinct document but, as a minimum, should:

- describe the systems and procedures to be used to plan and manage maintenance work
- specify the types of maintenance to be carried out, and why
- establish the order of priority for maintenance activities
- nominate the means of resourcing and implementing maintenance.

Development of a building maintenance strategy is generally more effective when undertaken by departmental teams involving: portfolio asset managers; facility managers; asset user representatives; maintenance service providers; and other relevant stakeholders.

### 4.1 Key elements of a maintenance strategy

A comprehensive maintenance strategy is comprised of a number of specific strategies (outlined in the following paragraphs) that address the various aspects of maintenance management.

---

2 A service delivery strategy outlines how a department intends to use its assets for service delivery, now and in the future.
**Technical strategy**

A technical strategy outlines the maintenance work to be undertaken and the purpose of this work. The MMF policy document describes each of the categories of maintenance work that must be incorporated, in an appropriate balance, into a departmental maintenance strategy.

The type of maintenance which should be applied to a particular building or its components will depend on the importance of that building (and its components) to service delivery, taking into account changes in direction (if any) in the service delivery strategy.

**Risk management strategy**

A risk management strategy identifies how a department intends to manage the risks associated with custodianship of building assets, taking into consideration factors such as health and safety, security of the building, loss of functionality, and perception of the community. The process of risk analysis and management is defined in the Australian/New Zealand Standard 31000:2009: Risk management – Principles and guidelines.

A department’s risk management strategy will determine its priorities in undertaking maintenance activities.

**Financial management strategy**

A financial management strategy identifies the department’s approach to funding building maintenance. This component of the maintenance strategy will focus on achieving value for money in maintenance expenditure and will influence the type, cost and planning of maintenance activities. The MMF policy document recommends a minimum funding benchmark of 1% of the building Asset Replacement Value (ARV) of the department's building portfolio.

**Procurement strategy**

A procurement strategy determines the methods used to procure maintenance services. It should reflect the Queensland Procurement Policy and any government policy about:

- incorporating maintenance requirements into construction for new capital works projects, so that maintenance costs are considered in conjunction with upfront capital costs as part of the investment decision-making process

- the use of competitive tendering of maintenance contracts for packages of existing assets, such as groups of schools, employee housing, and

- the use of prequalified contractors, where the type of work within the scope of maintenance may be classified as a “government building project” a term defined in the Attachment 1 of the Capital Works Management Framework policy document.

(For further information refer to the MMF policy document, the Capital Works Management Framework, and the Project Assessment Framework).
Management strategy

A management strategy will determine the management arrangements for building maintenance across the department. The strategy should include an outline of the organisational structure that will support management of maintenance at head office, regional, district and facility levels.

4.2 Benefits of formulating a maintenance strategy

A maintenance strategy that aligns with the departmental service delivery strategy will facilitate effective use of departmental resources and ensure better support of, and reduced disruption to, core business operations.

5.0 Developing a Strategic Maintenance Plan

In accordance with the MMF (policy requirement 4), departments must formulate a Strategic Maintenance Plan (SMP) as part of their agency asset planning process.

Strategic maintenance planning is a structured process undertaken to ascertain the immediate, medium and long term maintenance requirements of a department's building portfolio. The process is commonly undertaken at portfolio, regional/district, facility and building levels. The development of an SMP is usually undertaken by portfolio managers, assisted by facility managers, business managers, finance managers, planners, and capital works managers.

5.1 The planning process

Strategic maintenance planning involves a review and analysis of:

- the department’s building portfolio
- departmental corporate and service delivery objectives
- the building maintenance environment.

The planning process therefore requires a thorough understanding of the department’s: capital acquisition plans; service delivery strategy; and the contribution of the maintenance of building assets to service delivery outcomes.

The MMF policy document lists a number of specific factors that should be taken into account during the strategic maintenance planning process, including: service delivery plans; disposal or refurbishment plans; and emerging issues which may impact on buildings’ service potential. Once determined, the department’s maintenance requirements, along with all supporting information (see key elements in section 5.2), are documented in the SMP.
5.2 Key elements of a Strategic Maintenance Plan

An SMP should be a succinct document that contains information on, and analysis of, the following.

Status of the department’s existing building portfolio: Issues and trends

The SMP should include an analysis of the department’s building portfolio, with the objective of identifying any instances where key attributes of the building portfolio are impacting on departmental service delivery. Attributes that need to be considered include the building age, condition, remaining economic life and performance level. The SMP should also include an overview of maintenance-related issues and trends to facilitate identification of strategies to address/rectify potential problems.

The maintenance environment

As the maintenance environment can impact on maintenance demand and future maintenance costs, departments should outline the context (or environment) in which maintenance activities will be undertaken. Aspects of the maintenance environment that can impact maintenance demand include:

- new building assets and/or assets scheduled for refurbishment/disposal
- major repairs
- special maintenance programs or initiatives (e.g. asbestos removal)
- new policy/statutory responsibilities associated with workplace health and safety, the environmental impact or cultural heritage significance of buildings
- deferred maintenance trends and their correlation to the condition and performance of the existing building portfolio.

Maintenance budgeting: Implications, strategies and projections

The SMP should include current and likely future funding scenarios, based on the department’s building portfolio, corporate direction, maintenance analysis and the budgetary environment. Additional funding to meet increasing demands should be articulated, including any strategies for meeting these funding requirements. The risks associated with funding shortfalls should be substantiated with reliable data. All funding projections should be incorporated into the department’s capital acquisition plans and operating statement financial summary.

---

3 The MMF policy document defines deferred maintenance as “maintenance work that is postponed to a future budget cycle, or until funds become available. It excludes work earmarked in anticipation of a level of deterioration which did not occur (e.g. forecast repainting)".
Strategic review of maintenance management arrangements

The SMP should outline the process for reviewing maintenance performance (including maintenance programs, maintenance service provider arrangements and maintenance outcomes) to ensure that maintenance activities continue to support achievement of the department’s service delivery objectives and are in accordance with government policy. Any changes required to meet the projected strategic business and portfolio directions and improve the efficiency and effectiveness of maintenance should be identified and described.

Action plan

The action plan is a summary of the SMP. As such, it should draw on all of the preceding key elements and conclude with a list of key actions, responsibilities and implementation timeframes. This summary action plan will provide the basis for any future reviews and adjustments of the SMP.

5.3 Benefits of developing a Strategic Maintenance Plan

A rigorous strategic maintenance planning process will:
- facilitate efficient and effective asset management
- ensure future maintenance liabilities can be met effectively and in a timely manner
- prevent undue deterioration of the department’s building portfolio, and preserve building asset value, functionality and service potential
- ensure that all maintenance activities align with best practice and departmental service delivery strategies.

6.0 Key success factors for maintenance establishment

The following are key factors/considerations for successful implementation of a departmental maintenance policy, condition standard ratings, maintenance strategy and SMP.

Stakeholder consultation – which involves:
- seeking comments and (if relevant) agreement from stakeholders prior to submission of the final document(s) for approval by senior management
- conveying the essence of the policy/standards/strategy/SMP to building users (at an appropriate level) to enable their meaningful contribution to the implementation and review of these documents.

Authority/senior management endorsement – which involves:
- securing endorsement from senior management and recording this authority in accordance with departmental procedure/policy.

Interface with other corporate documents – which involves:
- reflecting relevant aspects of the policy/standards/strategy/SMP in departmental management policies, plans and procurement agreements.
7.0 Regular review

Regular review of departmental policy and strategy documents is necessary to ensure their alignment with government priorities and policies and confirm that maintenance priorities are appropriate and relevant to operational requirements. Condition standard ratings should also be subject to regular review to ensure that building assets are not over or under-rated.

**Maintenance policy** – arrangements to be reviewed should include:
- the application period of the policy
- policy review intervals
- arrangements for receiving and recording feedback between reviews.

**Condition standard ratings** – arrangements to be reviewed should include:
- review intervals – the review should be undertaken prior to commencement of the condition assessment program to allow for the incorporation of any altered ratings
- arrangements for receiving and recording feedback between reviews – changes to previously established ratings may be required where:
  - departmental service delivery requirements have changed
  - building assets have been scheduled for disposal or refurbishment
  - lower standards have become acceptable, thus presenting an opportunity to save on maintenance costs.

**Strategy documents (including SMP)** – arrangements to be reviewed should include:
- review intervals – the review should be aligned with the annual budget, agency asset planning and corporate planning cycles
- arrangements for receiving and recording feedback between reviews.
Table 1: Condition standards

Departments should use this table to determine the appropriate standard required at facility level or individual building level.

<table>
<thead>
<tr>
<th>Functional Purpose</th>
<th>Specified Standard</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly sensitive purpose with critical results (e.g. hospital operating theatre) or high profile public building (e.g. Parliament House).</td>
<td>Building to be in the best possible condition. Only minimal deterioration will be allowed.</td>
<td>S5</td>
</tr>
<tr>
<td>Good public presentation and a high quality working environment are necessary (e.g. modern multi-storey CBD building).</td>
<td>Building to be in good condition operationally and aesthetically, benchmarked against industry standards for that class of asset.</td>
<td>S4</td>
</tr>
<tr>
<td>Functionally-focused building (e.g. laboratory).</td>
<td>Building to be in reasonable condition, fully meeting operational requirements.</td>
<td>S3</td>
</tr>
<tr>
<td>Ancillary functions only with no critical operational role (e.g. storage) or building has a limited life.</td>
<td>Building to meet minimum operational requirements only.</td>
<td>S2</td>
</tr>
<tr>
<td>Building is no longer operational - it is dormant, pending disposal, demolition, etc.</td>
<td>Building can be allowed to deteriorate, however, must be marginally maintained to meet minimum statutory requirements.</td>
<td>S1</td>
</tr>
</tbody>
</table>

Where standards are specified at overall building level, detailed descriptions of what is meant by the S1 to S5 ratings should be articulated in terms of condition standards of key building elements most critical to delivery of services. This is because more complex and critical building elements will generally have specific performance requirements and these elements therefore may need to be maintained above the standards required of the overall building.

Such descriptions should be used to establish a common understanding and agreement with condition assessors by focusing on building elements most likely to warrant immediate repair or further assessments. The descriptions can also be used to monitor change in general condition over time.