

Maintenance Management Framework

Building Maintenance Budget



The suite of *Maintenance Management Framework* documents is available online (www.hpw.qld.gov.au):

1. the **Maintenance Management Framework policy document** contains the policy requirements and general information for Queensland Government departments about relevant asset management principles and practices;
2. **Guidelines** complement the policy by giving a more detailed explanation of a subject; and
3. **Policy advice notes** discuss emerging policy issues or topical maintenance matters.

Building Maintenance Budget

Revised Second Edition

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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.

1.1 Scope

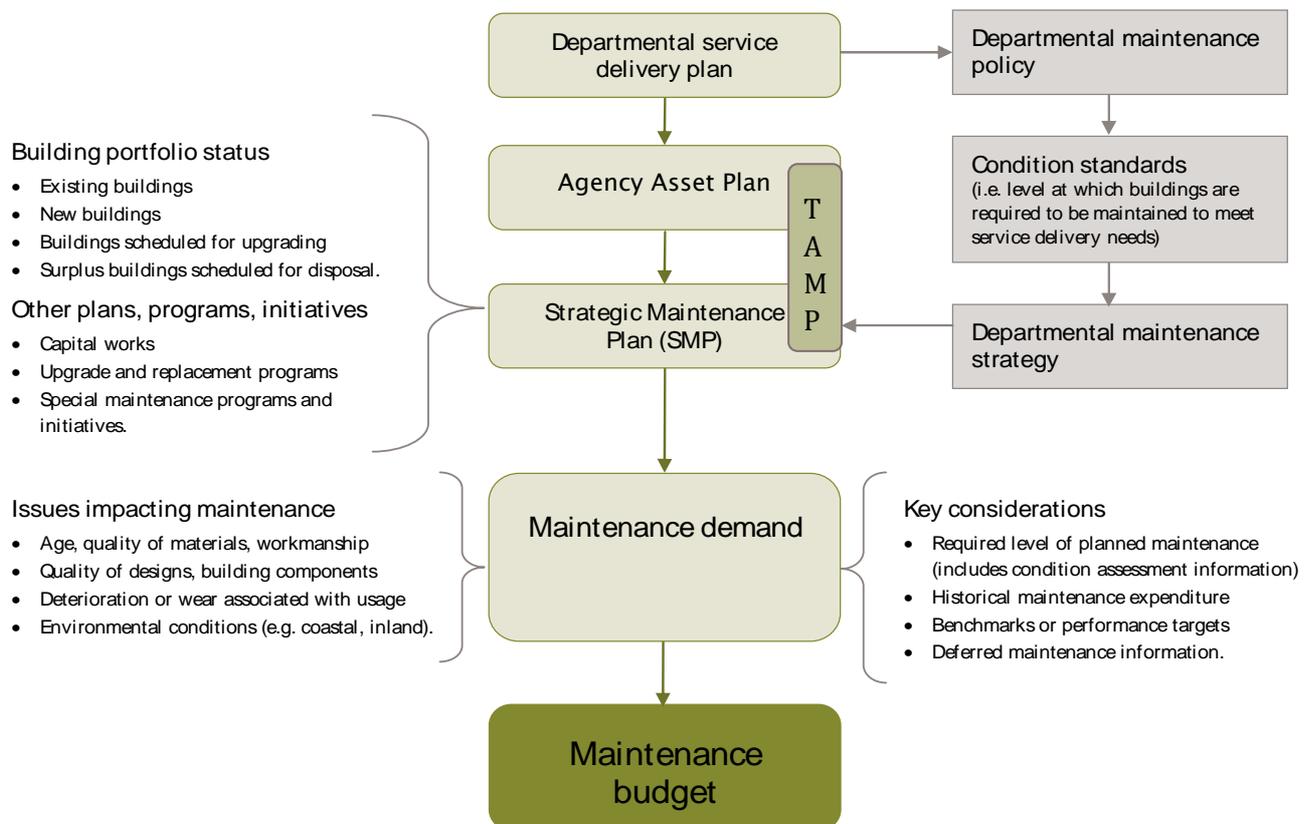
This guideline provides departments with advice on how to develop an annual building maintenance budget. A maintenance budget should identify the quantum of funding a department requires to adequately address the key maintenance needs of its buildings, to ensure that they continue to support the delivery of government services.

2.0 Development of an annual maintenance budget

In accordance with policy requirement 7 of the MMF, “departments must allocate sufficient funding in their maintenance budget to enable the buildings in their portfolio to be maintained to the condition standard ratings identified and documented in the departmental maintenance policy”.

A maintenance budget should be based on maintenance demand. This is illustrated in **Diagram 1**.

Diagram 1: Development of an annual maintenance budget



An annual maintenance budget should provide a costed program of works proposed over the timeframe required by the *Total Asset Management Plan* (TAMP) Framework, based on

levels of service planned, the departmental maintenance policy, the building condition standards and the strategic maintenance plan. The maintenance budget should support departmental efforts to meet environmental performance requirements. For example, sufficient funding should be allocated for replacing components at the end of their useful life with modern equivalents that reduce energy and water consumption or have the potential to reduce long-term maintenance needs.

The type of work that is considered maintenance (within the context of the MMF policy) is included in [Appendix 1](#). Supplementary information on identifying building maintenance activities, as distinct from building operations, is provided in the MMF policy advice note: *Scope of Building Maintenance*.

Differentiating between maintenance expenditure and capital expenditure is important due to the difference in accounting approaches (and tax liabilities) associated with these expenditures. For example, maintenance expenditure affects the cost of a department's outputs, while capital expenditure impacts on the value of the department's assets and, subsequently, depreciation and equity return. At times, the nature or intent of the work (or parts of the work) identified may extend beyond restoring an asset to its original condition, capacity or function. In these cases, the expenditure may be more appropriately classified as a "capital outlay" (i.e. it increases the value of the asset on which the expenditure is incurred). Further guidance on determining whether work is most appropriately classified as maintenance expenditure or capital expenditure is provided in the MMF policy advice note: *Capital or Expense?: A Guide for Asset and Maintenance Managers*.

Establishing an adequate maintenance budget requires an understanding of many variables associated with maintaining building assets, particularly when dealing with a portfolio that consists of a complex building mix (i.e. buildings of different ages, varied geographical location/climate, intensity of use and functional/service delivery requirements).

When formulating a maintenance budget, due consideration must be given to agency asset plans¹, including:

- existing assets to be maintained
- new assets requiring maintenance
- existing assets to be upgraded, refurbished or have components replaced (a "minimum maintenance" approach may be appropriate for these assets in the lead up to the intended actions)
- existing assets identified for inclusion in special maintenance programs and initiatives (as applicable)
- existing surplus assets scheduled for disposal.

¹ Information about agency asset plans is provided in the *Strategic Asset Management Framework* guideline: *Asset Planning for Buildings*. The [Total Asset Management Plan Framework](http://dilgp.qld.gov.au/infrastructure/total-asset-management-plan-framework.html) (<http://dilgp.qld.gov.au/infrastructure/total-asset-management-plan-framework.html>) applying to all departments, contains specific requirements aimed to facilitate a coordinated approach to asset management across Queensland Government.

Key factors that impact the level of maintenance funding include:

- quality of materials and components in buildings
- quality of designs and workmanship in construction
- deterioration or wear associated with usage/occupancy
- climatic conditions (e.g. coastal or inland)
- required level of planned maintenance to meet the desired condition standards (refer to the MMF guideline, *Building Maintenance Policy, Standards and Strategy Development*, for further information)
- the outcomes of previous budget reviews and historical maintenance data.

The calculation of the quantum of funding required should be governed by the total maintenance needs of a department's portfolio (i.e. maintenance demand), and not based on perceived limitations related to availability of funds. It is a department's responsibility to seek the required level of funding to address identified maintenance needs. This may require additional funding being sought from Government (i.e. through the annual appropriation funding process) or reallocating funds from internal funding sources.

The development of a maintenance budget should be part of the annual budgetary process undertaken by departments. The requirements and timeframes for budget development are administered by Queensland Treasury².

2.1 Maintenance budget composition

In determining the composition of a maintenance budget, a department's maintenance funding needs should be split into the following cost components (as endorsed by the Cabinet Budget Review Committee):

- condition assessment costs
- statutory maintenance costs
- preventative maintenance costs
- condition-based maintenance costs
- unplanned maintenance costs
- agency³ maintenance management costs

A definition for each of these budget components is presented in **Table 1**.

² Under the *Financial Accountability Handbook* (prepared by Queensland Treasury in accordance with the *Financial and Performance Management Standard 2009*) there is an expectation that agencies with a significant asset base will consider asset planning as part of overall agency planning processes. 'Significant' assets may be defined as those assets with a high dollar value, those that provide a key role in the delivery of agency services, or those that bring potential high risk to agency operations in the event of failure.

³ In this guideline, the term "agency" has the same meaning and is used interchangeably with "department" (as defined in section 8 of the *Financial Accountability Act 2009*).

Table 1: Maintenance budget components

Cost component	Definition
Condition assessment cost	This is the cost of undertaking condition assessments in accordance with the MMF.
Statutory maintenance cost	This is the cost associated with undertaking maintenance to meet mandatory requirements of various regulations such as the servicing of fire protection systems.
Preventative maintenance cost	This is the cost associated with the periodic servicing of plant and equipment and preventative repairs to other building components to ensure reliable operation, comply with "duty of care" responsibilities and general good maintenance practice to preserve assets in a condition appropriate for service delivery.
Condition-based maintenance cost	Condition-based maintenance is maintenance undertaken as a result of deteriorated condition identified through condition assessments. In this regard, funding of this component is variable and less predictable.
Unplanned maintenance cost	Unplanned maintenance is reactive work undertaken as a result of breakdowns and routine failure of building components and services. Funding of this component of maintenance would fluctuate in varying degrees between agencies. However, historical data should provide guidance in terms of annual estimates of funding required.
Agency management cost [*]	This is the cost incurred by agencies in managing maintenance and includes the costs of management personnel, maintenance management systems, financial administration and other overhead costs. Activities to be costed include: general management; administration; maintenance planning; program formulation; program management; and contract management (if maintenance is outsourced).

Agency management cost^{*} -However, the magnitude of this cost component should be relative to the total maintenance expenditure for the building portfolio. Departments must ensure that there are appropriate mechanisms in place to achieve sustained reductions of management costs by using appropriate administrative and decision-making processes and systems for planning and monitoring the maintenance delivery.

Departments should structure ledgers or cost centres around the cost components listed above to get a clear indication of where maintenance funds have been expended.

2.2 Basis of a maintenance budget

A maintenance budget should be prepared with provisions for the works program (i.e. the annual program of total maintenance works) and the type of maintenance/maintenance strategy to be applied to a particular building or its components.

2.2.1 Works program

The works program should consist of a balance of planned and unplanned maintenance (departments should endeavour to minimise unplanned maintenance).

Planned maintenance includes preventative service, condition-based and statutory maintenance.

Unplanned maintenance incorporates corrective and breakdown and incident maintenance.

If future directions for a maintenance strategy require minimal maintenance for minor, non-critical buildings and for buildings scheduled for refurbishment, replacement or disposal, the maintenance budget should be adjusted accordingly.

In determining a sufficient level of funding for condition-based maintenance, cost estimates provided from condition assessments need to be carefully reviewed by departments to ensure they are up to date in relation to a department's priorities and recommended timing of works. This is particularly relevant for remedial work to be undertaken in the longer term, and if the economic state of the building industry has changed. Further guidance on the planning and implementation of condition assessments, including reviewing cost estimates of remedial works⁴, is provided in the MMF guideline: *Building Condition Assessment*.

2.2.2 Key considerations in maintenance budget decisions

Departments are responsible for identifying and carrying out actions for reducing backlog/deferred maintenance or regularly evaluating the risks associated with allowing works to be deferred. When evaluating these risks, risk management techniques as described in the *Australian/New Zealand Standard AS/NZS ISO 31000:2009 Risk management -Principles and guidelines* should be utilised.

In order to reduce backlog/deferred maintenance, departments may wish to explore the following options:

- seeking special funding as part of their annual maintenance budget process
- reallocating funds from internal funding sources.

Maintenance decisions should be coordinated with projected future major repairs or replacements over a planning period. Significant future major plant/equipment replacements (e.g. to lifts or air conditioning chillers) which may impact on maintenance decisions can be identified from handover and commissioning manuals (also referred to as manufacturer's maintenance manuals and warranties). Cost estimates for such replacements can be obtained from manufacturers, other firms and/or professionals and should be factored into maintenance budgets.

Maintenance budgeting decisions associated with replacing building components (e.g. sanitary plumbing fittings, lighting systems) should include consideration of whole-of-life costs, including the initial costs of procuring the building component and the long-term maintenance, operating and disposal costs.

Departments should utilise appropriate building performance information (e.g. location, functionality, utilisation rate, remaining life) to determine if high maintenance buildings should be assessed for possible refurbishment or disposal. Guidance on assessing the performance of building assets is provided in the *Building Asset Performance Framework: A Best Practice Guideline for the Performance Assessment of Queensland Government Buildings*.

⁴ The interpretation of cost estimates should be made with appropriate allowance for cost escalation. Escalation rates data may include the CPI and wage price index published by the Australian Bureau of Statistics (ABS) along with related indices published by other parties (for example, trends within the Queensland building industry as relevant to the activities of the Department of Housing and Public Work, is available in the Building Industry Bulletin (<http://www.hpw.qld.gov.au/aboutus/ReportsPublications/Newsletters/BuildingIndustryBulletin/Pages/Default.aspx>)).

Departments should explore opportunities for efficiencies/savings when determining maintenance programs, including:

- coordination of inspections and possible sequencing/bundling of maintenance works with other departments in remote or regional locations, especially where the same service provider is engaged by more than one department
- provision of building and other information required that might impact on the delivery of the maintenance services, thus assisting the service provider to deliver the service as efficiently and effectively as possible.

Consideration should also be given to opportunities for cost-effective improvements in building performance through the use of appropriate water saving fittings and adoption of innovative technologies such as energy-efficient lighting.

3.0 Managing a maintenance budget

Managing a maintenance budget includes:

- establishing priorities
- regular monitoring and reporting including analysis of budget components against actual expenditure. Where maintenance services are contracted, the monitoring of budgets may include consultation with facility managers/maintenance service providers regarding scheduling, and material and equipment needs
- establishing accountabilities and performance requirements
- monitoring against benchmarks and policy requirements
- managing variances and contingencies and monitoring the effects of deferred maintenance where required.

Where additional maintenance funding is allocated for emergent priorities (e.g. the reduction of backlog/deferred maintenance), this should be integrated into the maintenance budget.

4.0 Reviewing a maintenance budget

Departments should ensure that a rigorous review of their maintenance budget is undertaken each year, including an assessment of the achievements of previous year maintenance budget against the intended outputs and impacts. The review should target the following factors that impact a maintenance budget:

- adequacy
- affordability
- efficiency
- effectiveness
- competitiveness
- compliance.

A maintenance budget should be reviewed to identify:

- if previous budgets have been adequate
- any actions/corrections required (such as funding replacements rather than ongoing repairs) and/or adjustments to the budget development process.

To assess the adequacy of a maintenance budget, departments need to have in place appropriate maintenance information systems to monitor building and maintenance performance.

A maintenance budget should also be assessed in relation to affordability. Building assets can be maintained to different standards of physical condition which impact on the cost of maintenance. The higher the standard, the higher the budget requirement will be (all other things being equal). If however, the budget is not sufficient to meet the standards set, then it raises the question of whether:

- standards established for functionally-focused buildings are realistic and can be afforded
- buildings are so far below the desired standards that special funding above the normal maintenance requirements may be required
- maintenance funding needs to be increased.

The efficiency of maintenance planning, management and delivery also impact maintenance budgets. As such, a review of a maintenance budget needs to take into account the efficiency and effectiveness of maintenance demand assessment, planning and program management. Reviewing the pattern of maintenance expenditure in existing buildings and evaluating the effects of maintenance previously undertaken (including cost drivers) can highlight opportunities to improve efficiencies.

Efficiencies in delivering the maintenance program (such as costs related to the time and resources used to deliver the program, including any matters associated with the level of transactions and rectification of work) should be part of the assessment of a maintenance budget. To facilitate efficiency improvements, departments should monitor and review maintenance performance (in accordance with MMF policy requirement 10) and encourage proactive responses from maintenance service providers.

To assess the appropriateness of a maintenance budget, departments should use relevant performance targets or benchmarks in line with the performance indicators in the *Building Asset Performance Framework: A Best Practice Guideline for the Performance Assessment of Queensland Government Buildings*. A relevant performance indicator is “maintenance cost” which can be measured as: the cost per square metre of gross floor area; expenditure as a percentage of gross book value of the building asset; or other department-specific measures.

The review of maintenance budgets may include comparison with benchmarks based on technical advice or research by other jurisdictions with similar building portfolios (buildings of a similar nature, service delivery role, and operating in similar climatic conditions).

Finally, departments should ensure that their maintenance budgets effectively support any relevant departmental policies and guidelines, including their departmental maintenance policy and their financial management strategy to fund building maintenance. The amounts being budgeted for maintenance at portfolio level should meet or exceed the minimum funding benchmark recommended by the MMF of 1% of the building Asset Replacement Value (ARV) of the department's building portfolio. Information on this funding benchmark is available in [Appendix 2](#) and in the MMF policy advice note, *Minimum maintenance funding benchmark for annual departmental budget*.

A list of key policies, guidelines and policy advice notes impacting building maintenance budgeting is included in [Appendix 3](#).

An appropriate maintenance budget will ensure that sufficient funds are identified to address the maintenance needs of a department's buildings, thereby ensuring that these buildings meet service delivery needs. An appropriate budget can be achieved by integrating competing priorities and actions, addressing strategic issues and assessing the opportunities and risks associated with the distribution of maintenance funds to areas that are critical to service delivery.

Appendix 1: Definition of maintenance

The following definition is an extract from the MMF policy document.

Within the context of the MMF, maintenance is defined as work on existing buildings undertaken with the intention of:

- re-instating physical condition to a specified standard
- preventing further deterioration or failure
- restoring correct operation within specified parameters
- replacing components at the end of their useful/economic life with modern engineering equivalents
- making temporary repairs for immediate health, safety and security reasons (e.g. after a major building failure)
- assessing buildings for maintenance requirements (e.g. to obtain accurate and objective knowledge of physical and operating condition, including risk and financial impact for the purpose of maintenance).

The following are not classified as maintenance:

- improvements and upgrading to provide additional or new service capability or function
- upgrading to meet new statutory requirements
- major refurbishment and replacements to extend the useful life of the building
- restoration of the entire building to operational condition after total or near total failure (e.g. resulting from natural disasters)
- work performed under warranty or defects liability period
- operational tasks to enable occupancy and use (e.g. cleaning, security, waste management)
- supply of utilities (e.g. energy, water and telecommunications).

Appendix 2: Maintenance funding benchmark

The following information is extracted from the MMF policy document.

The MMF recommends a minimum funding benchmark of 1% of the building Asset Replacement Value (ARV) of the department's building portfolio.

The ARV for buildings is the best estimate of the current cost of constructing (for its original use) a new facility providing equivalent service potential as the original asset. It does not include the value of the furnishings or other items not permanently part of the facility, nor does it include design and project management costs.

Departments should view this 1% funding recommendation as the minimum threshold for annual maintenance expenditure for the building portfolio, not as the optimal funding level.

Example: If a department has a building portfolio with a current ARV of \$800 million then (subject to many variables) it is reasonable to expect a minimum of \$8 million for that year's maintenance budget.

It is likely that a department's maintenance budget will exceed the recommended minimum threshold of 1% of the ARV if the portfolio has:

- unfunded or deferred maintenance projects
- ageing or deteriorating buildings
- heritage or iconic buildings
- highly critical or complex facilities.

Appendix 3: List of key policies and guidelines

Key policies, guidelines and policy advice notes impacting on building maintenance budgeting are listed below:

Maintenance Management Framework (MMF policy document)

(Department of Housing and Public Works)

www.hpw.qld.gov.au

Building Maintenance Policy, Standards and Strategy Development (MMF guideline)

(Department of Housing and Public Works)

www.hpw.qld.gov.au

Capital or Expense?: A Guide for Asset and Maintenance Managers (MMF policy advice note)

(Department of Housing and Public Works)

www.hpw.qld.gov.au

Minimum Maintenance Funding Benchmark for Annual Departmental Budget (MMF policy advice note)

(Department of Housing and Public Works)

www.hpw.qld.gov.au

Building Asset Performance Framework (A Best Practice Guideline for the Performance Assessment of Queensland Government Buildings)

(Department of Housing and Public Works)

www.hpw.qld.gov.au

Asset Planning for Buildings (Strategic Asset Management Framework guideline)

(Department of Housing and Public Works)

www.hpw.qld.gov.au

Financial Accountability Handbook

(Queensland Treasury)

www.treasury.qld.gov.au

Non-Current Asset Policies for the Queensland Public Sector

(Queensland Treasury)

www.treasury.qld.gov.au

Total Asset Management Plan Framework

(Department of State Development, Manufacturing, Infrastructure and Planning)

<http://dilgp.qld.gov.au/infrastructure/total-asset-management-plan-framework.html>