

Environmental Sustainability Management

Environmental sustainability should be a key consideration in the management of all government buildings. The Queensland Government's sustainability agenda is outlined in [Queensland Climate Transition Strategy](#) and [Queensland Climate Adaptation Strategy](#).

Departments have a key role to play in supporting this agenda during the planning, construction, operation, maintenance and disposal of government buildings by reducing negative environmental impacts and ensuring services to the community are resistant to climate change.

Departments should establish asset management and procurement practices which align with relevant requirements in the following:

Legislation

- [Building Act 1975 \(Qld\)](#)
- [Building Regulation 2006 \(Qld\)](#)
- [Planning Act 2016](#)

Building codes

- [Building Code of Australia – National Construction Code Volumes One and Two](#) (Australian Building Codes Board)
- [Queensland Development Code](#) (Department of Housing and Public Works)

Policies and Strategies

- [Capital Works Management Framework](#) (Department of Housing and Public Works)
- [Queensland Procurement Policy](#) and [Strategy](#) (Department of Housing and Public Works)
- [Queensland Building Plan](#) (Department of Housing and Public Works)

Agreements

[Australian and New Zealand Government Framework for Sustainable Procurement](#)

Attachment 1 provides a comprehensive list of policies, guidelines and other resources which are relevant to environmental sustainability.

In this guideline the term 'agencies' is equivalent to, and used interchangeably with, 'departments' (as defined in s8 of the [Financial Accountability Act 2009](#)).

Benefits

Using environmentally sustainable practices for the management of government buildings will:

- improve the ability of departments to meet the sustainability targets, savings and outcomes in the planning, construction, operation and maintenance of government buildings
- accelerate and maintain the organisational improvement efforts related to environmental sustainability
- address likely effects of climate change in the planning processes to ensure that government services are resistant to the impacts of climate change.

Risks

There may be significant consequences if environmentally sustainable practices are not integrated into the management of government buildings including:

- funding inefficient use of resources
- adverse community perception if the Government is not seen to be proactively addressing the impact of climate change
- reducing the ability for departments to deliver services in case of significantly changed climatic conditions.

1.0 Key aspects of environmental sustainability

Departments should address the following aspects of environmental sustainability when planning, constructing, operating and maintaining government buildings:

- undertaking life-cycle planning analysis to support strategic management and decision-making processes. Life-cycle costings and consideration/investigation of the environmental impact of a building solution undertaken during the project feasibility study should be documented in the business case for that project.
- integrating sustainability into procurement processes in accordance with the *Queensland Procurement Policy* (QPP) and the associated purchasing guidance [Optimising Opportunities for Local Suppliers](#) administered by the Department of Housing and Public Works through the Queensland Government Office of the Chief Advisor - Procurement
- setting, achieving, measuring and reporting (annually) on sustainable procurement targets which align with the agency's strategic and operational procurement objectives and government's strategies. Agencies should contribute to improvement to energy efficiency and emission objectives of government by complying with actions in the Queensland Procurement Strategy and the Queensland Building Plan.

Planning stage:

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- using information and lessons learnt from managing existing buildings, with a focus on:
 - assessing heating, ventilation and air conditioning (HVAC) systems for improving energy efficiency, for instance by looking at the impacts and energy saving potential from better fan technology, ductwork and insulation
 - using new lighting and sensor technologies to reduce artificial lighting power densities
 - improving building sealing to prevent unintended air leakages
 - glazing and shading to limit unwanted heat gain or loss
 - control systems to improve the energy efficiency of the building (by setting optimum performance in terms of zoning, equipment scheduling, peak demand usage and hours of operations)
 - monitoring equipment for waste production, energy and water use
- developing and adopting environmentally sustainable approaches to the design and construction of their buildings and demonstrating leadership by reducing the environmental impact of greenhouse gas emissions, waste production, energy and water use of their existing buildings
- considering application of environmental ratings to Queensland Government building projects
- for any project submission/proposal seeking approval from Government, provide information to enable good decision making. Assessment and consideration of social impacts for business case development will need to provide a broad picture of economic, social, and environmental impacts and risks
- using project designs and functional and performance (rather than technical) specifications) that consider:
 - local industry participation when specifying building industry products and, where necessary, nominating proprietary products of local (i.e. Australian and New Zealand) origin before those from other countries. Refer to the CWMF policy advice note *Local Content in Queensland Government Building Projects*, for further guidance on developing specifications that complement the objectives the *Queensland Procurement Policy* and the associated Strategy
 - reduced greenhouse gas emissions attributable to construction and operation of buildings
- Where a particular environmental rating or environmental performance requirement has been set for a government building project, the proponent department should ensure that all parties to the project understand their roles in, and commit to, achieving the rating or performance requirement.
- Agencies should be aware that [disaster management plans](#) and guidelines, including the *Design Guidelines for Queensland Public Cyclone Shelters* may impact on the design and construction of government buildings
- Through improved efficiency in delivery of projects, departments will be able to support the commitment to achieve the Government's 2050 zero net emissions target, in accordance with the *Queensland Climate Transition Strategy*.

Investment/p
rocurement
stage:

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- Departments are required to liaise with the Department of Housing and Public Works to discuss and jointly plan their office accommodation needs. All approaches to private sector office building owners should be made through the Department of Housing and Public Works
- undertaking commissioning and handover processes that facilitate proper management of the building asset and ensure environmental performance is maintained over the life of the building. This should include identifying and implementing adequate management strategies to ensure that manuals, specifications, certificates and as-built drawings are handed over (in accordance with the requirements prescribed in the CWMF guideline: [Handover: Guidance for commissioning and handover associated with Government building projects](#)) to officers responsible for operating and maintaining the facility. During handover, there should be an emphasis on thorough training and orientation of facility managers, maintenance personnel and plant operators, particularly regarding their respective roles in maintaining the environmental performance of the building. The operation and maintenance manuals provided during handover should include procedures/maintenance activities (e.g. manufacturer recommendations for appropriate maintenance and cleaning regimes; settings for plant and equipment) that will allow sustainable buildings to perform to the expected level.
- once an environmentally sustainable building is in use, departments should:
 - ensure that environmental performance data is reviewed and analysed at appropriate intervals to maintain and improve performance levels
 - actively monitor the building's compliance with environmental performance requirements, including:
 - any contractual requirements for the maintenance service provider/contractor to provide regular and accurate environmental performance information
 - the contribution of building users/tenants to the building's overall environmental performance (e.g. through recycling, turning off lights and computers)
- ensuring appropriate disposal planning of government buildings. Agencies should comply with legislation related to the treatment of resources with value (including places with cultural heritage significance registered in the Queensland Heritage Register). Agencies planning to demolish a State registered heritage asset must proceed under section 71 of the *Queensland Heritage Act 1992* (further details are included in the *Strategic Asset Management Framework* guideline: [Heritage Asset Management](#))
- disposal of a government building may be achieved in a number of ways, including transfer to another agency or open market sale (refer to the *Strategic Asset Management Framework* guideline: [Asset Disposal](#) for more detailed information). If a building asset's physical condition has deteriorated to such a level that it is uneconomical to renovate/rehabilitate/refurbish, demolition may be the preferred alternative. At this stage, the benefits of choosing an environmentally sustainable approach to the building materials will become apparent. As part of the planning for disposal by demolition, departments should consider whether any components of the building may be:
 - reused or reallocated
 - returned to the supplier for reuse or recycling
 - contributed to a waste exchange program

Management -
in-use stage:

Disposal stage:

- recycled locally.

After demolition, consideration should also be given to the mitigation of potential long-term pollution risks, and to the reinstatement of landforms which are safe, stable and compatible with the surrounding ecosystem.

The Department of Housing and Public Works can assist agencies if they require additional advice about integrating the principles of ecologically sustainable development in government buildings, programs, environmental strategies and initiatives.

Attachment 1: List of policies and other relevant resources

[Australian and New Zealand Government Framework for Sustainable Procurement](#)

(Australasian Procurement and Construction Council) supports and encourages collaboration between government jurisdictions to develop national programs and tools to promulgate the principles of sustainable procurement. The application of homogenous approaches to sustainability in contracting reduces duplication of effort across jurisdictions, delivers cost savings and sends a clear, consistent message to the market regarding the Government's commitment to sustainable alternatives. Underpinning the Framework is the Sustainable Procurement Practice Note accompanied by a suite of generic Sample Templates for Sustainable Procurement Processes.

[Business Case Development Framework Resources](#) (Building Queensland) provide expert advice to Queensland Government agencies to enable better infrastructure decisions. This includes guidance on social impact evaluation, integrated with economic and environmental impacts (i.e. noise, local air quality, water pollution, greenhouse gases, nature and landscape, biodiversity and urban separation) to be considered.

[Capital Works Management Framework](#) (Department of Housing and Public Works) is the Queensland Government's key policy for managing risks in the planning and delivery of government building projects. It identifies the major risk areas and sets out the steps that should be taken to manage those risks and achieve consistency and high quality outcomes in the procurement of government building projects.

Capital Works Management Framework guideline: [Handover: Guidance for commissioning and handover associated with government building projects](#) (Department of Housing and Public Works) provides agencies with information about the rigorous commissioning and handover processes associated with government building projects. This is critical to the smooth and effective transition between project delivery, maintenance and operations.

Project Assessment Framework (PAF) (Queensland Treasury) provides tools and techniques to assess projects throughout the project lifecycle. The PAF's [Business Case Development](#) outlines that an environmental analysis, which provides decision makers with information about the environmental issues associated with a project option, is required for all capital projects to ensure that they meet the requirements of the *Environmental Protection Act 1994* and other relevant legislation

Capital Works Management Framework policy advice note: *Local Content in Queensland Government building projects* (Department of Housing and Public Works) in the context of a government building project, 'local content' refers to goods, services and labour provided by businesses located in close geographical proximity to the project site.

[Queensland Climate Change Response](#) (Department of Environment and Science) outlines the commitments and actions the Queensland Government will take to transition to a low carbon, clean growth economy and adapt to the impacts of a changing climate. The Queensland Climate Transition Strategy clearly seeks to lead by example through low-carbon government procurement, using funding, policy and purchasing levers to deliver emissions reductions. The Queensland Climate Adaptation Strategy outlines how the Queensland Government will prepare for current and future impacts of a changing climate, reduce risk and increase resilience.

[Queensland Climate Transition Strategy: Pathways to a clean growth economy](#) (Department of Environment and Science) outlines how we will transition to a zero net emissions future that supports jobs, industries, communities and the environment.

[Design Guidelines for Queensland Public Cyclone Shelters](#) (Department of Housing and Public Works) provides detailed advice about site selection for the design of new buildings and for the assessment and upgrade of existing buildings, including management and operational aspects. In this context public cyclone shelters are defined as “buildings that provide shelter **during** a severe tropical cyclone” not recovery centres which are occupied **after** such an event.

[National Strategy on Energy Efficiency](#) (Council of Australian Governments) encompasses ways to improve the energy efficiency of government operations, and consequently reduce the whole of life cost and environmental impact.

[Office Accommodation Management Framework: Office Accommodation Workspace and Fitout Standards Guideline](#) (Department of Housing and Public Works) provides a basis for planning and designing fitout of office accommodation that is safe, healthy and legislatively compliant; functional and cost-effective; consistent, equitable and sustainable and adaptable to new ways of working and new technology.

[Queensland Development Code](#) (Department of Housing and Public Works) consolidates Queensland-specific building standards into a single document. The Code covers Queensland matters outside the scope of, and in addition to, the Building Code of Australia – National Construction Code Volumes One and Two.

[Queensland Procurement Policy](#) and the [Queensland Government Procurement Strategy](#) (Department of Housing and Public Works) requires that each department “use its best endeavours to ensure that competitive local firms that comply with relevant legislation are given a full, fair and reasonable opportunity to supply the Queensland Government”. This approach to procurement represents a key element in achieving value for money in the expenditure of government funds and supports the advancement of government priorities with respect government’s vision for procurement – Backing Queensland Jobs.

[State Infrastructure Plan](#) (SIP) outlines the Queensland Government’s strategic direction for the planning, investment and delivery of infrastructure in Queensland, noting that Queensland’s infrastructure must be sustainable, resilient and work with the environment to reduce impacts and improve our ability to recover from natural disasters.

The suite of guidelines which comprise the *Strategic Asset Management Framework* (available online at www.hpw.qld.gov.au) is organised under the following categories:

1. **Overview** - explains the principles and concepts of strategic asset management as they apply to buildings.
2. **Guidelines** - expand on key aspects of strategic asset management to inform decisions over the entire life-cycle of the asset.
3. **Decision-making methodologies and guidelines** - support agencies to implement best practice strategic management of buildings.

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