

Department of
Public Works

Recycling policy for buildings and civil infrastructure



Public Works
Queensland Government

A whole-of-Government recycling policy for buildings and civil infrastructure

Policy statement

The Queensland Government is committed to maximising the recovery of construction materials used in building and civil infrastructure projects to help conserve resources and contribute to ecologically sustainable development.

Policy objective

The Queensland Government's objective is to ensure that all practical and cost-effective opportunities for recycling and reuse of construction materials used in building and civil infrastructure projects are implemented.

Scope

The policy applies to all Queensland Government agencies and Government Owned Corporations that are responsible for the management of government buildings and civil infrastructure (refer to **Appendix 1**).

The policy applies to projects involving the construction, refurbishment and demolition of buildings and civil infrastructure, however, does not include projects or programs associated with maintenance or operations of buildings or civil infrastructure.

The policy applies only to Queensland Government agencies and Government Owned Corporations which have direct responsibility for such construction, refurbishment or demolition projects.

The policy applies to these projects undertaken in Queensland, with provisions for extenuating circumstances and/or regional factors which limit the capacity for recycling.

The policy excludes asbestos and other hazardous materials.

Key principles/elements

The policy is underpinned by the following key principles and elements:

- The policy is in accordance with the *Environmental Protection (Waste Management) Policy 2000*.
- With regard to office buildings, the policy complements non-mandatory Green Star™ objectives developed by the Green Building Council of Australia.
- Recycling must be viewed in the broader context of the waste management hierarchy (as outlined in the *Environmental Protection (Waste Management) Policy 2000*) which specifies the following order of preference (from most to least) for dealing with waste: avoidance, reuse, recycling, energy recovery and disposal.

- While the terms ‘recycling’ and ‘reuse’ have technically different meanings (refer to **Appendix 1**), for the purposes of this policy recycling includes reuse since the two processes have the common outcome of diverting potential waste from landfill.
- The policy requires agencies to demonstrate a commitment to recycling by ensuring that a selected contractor or in-house service provider will have developed a Recycling Management Plan for each applicable project (those within the policy ‘scope’ as outlined above). The necessity for a plan will be covered in a section of the project specification dealing with contractors’ recycling obligations (refer to **Appendix 2**).
- A Recycling Management Plan will include details on recycling measurement, recording and reporting requirements. Under this policy, it will become mandatory for agencies and Government Owned Corporations to report recycling activities and achievements against targets in their annual reports.
- The policy will introduce a non-mandatory recycling/reuse target of 40% for building and infrastructure projects for an initial two year period. This target applies to the recycling and/or reuse of waste materials by weight generated by project activities for relevant projects in Queensland. This percentage refers to the weight of total material that would otherwise be disposed of in landfill.
- It should be noted that the target of a minimum 40% by weight is a minimum and that a higher rate of materials recycling would be more consistent with contemporary national recycling objectives. However, the policy allows for a relaxation of the target for projects for which the recycling potential is limited by the nature of the project or by extenuating circumstances of a geographic, ecological or financial nature. The policy allows the extent of recycling to be determined on an individual project basis. For a project where it can be demonstrated that recycling is not cost effective or will have a negative impact on the project budget, the agency may decide on the extent to which recycling will be applied for that project. Recycling opportunities and/or limitations, in accordance with the pursuit of best practice (as defined in **Appendix 1**), will need to be considered and documented in a project’s Recycling Management Plan. The management and endorsement of this plan is an internal issue for each agency.
- The Department of Public Works will review the policy two years after its implementation, at which time the impact of other potential changes in Government policy can be assessed. This will include a review of the above target in the light of performances of agencies as reported in their annual reports with the aim of establishing a benchmark at the end of this two year period in full consultation with agencies.
- Thereafter, the role of the Department of Public Works will be to annually review recycling achievements in government projects as reported in agencies’ annual reports.
- Information in annual reports will be used as the basis for monitoring policy implementation, particularly the appropriateness and effectiveness of the recycling target.

Policy implementation

A project specification outlining contractors' obligations with respect to recycling, including requirements as per a Waste Management/Recycling Plan for each relevant project, is included as **Appendix 2**.

The Department of Public Works is developing a communication strategy to provide direction for the implementation of the recycling policy.

The policy is intended to be released on 1 January 2009, with its implementation to commence from 1 July 2009. Projects for which planning commences from this date (1 July 2009) will be subject to the policy requirements, and recycling/reuse activities for these projects will be reported in agencies' 2009-2010 annual reports.

Definitions and meanings of terms

Agency

A department of government as defined under Section 4a of the *Financial Administration and Audit Act 1977*.

Applicable projects

Projects involving construction, refurbishment and/or demolition of buildings or civil infrastructure under the control of Queensland Government agencies and Government Owned Corporations.

[Maintenance and operational projects are excluded from the scope of this policy.]

Best practice

A way or method of accomplishing a business function or process that is considered to be superior to all other known methods.

Civil infrastructure

Civil Infrastructure is a collective term for public works required for that component of an industrial economy not associated with the military. Apart from buildings, it includes bridges, roads, rail lines, cycle and pedestrian pathways, tunnels, dams, reservoirs, pipelines, airports, ports and marinas, telecommunication infrastructure, headworks of industrial plants, distribution grids and recreational infrastructure.

Department

As for agency.

Government Owned Corporation

Government Owned Corporation as defined in the *Government Owned Corporations Act 1993*.

Recycling

Reprocessing into a form that allows materials to be reclaimed as a secondary resource that can be used, in whole or part, to replace virgin materials.

Re-use

The reintroduction of a waste material or product into the economic stream without any substantial chemical or physical change but not excluding repair, refurbishment or cleaning of the material.

Specification section: project waste management

1. Introduction

1.1 Outline

This section of the specification applies to the reduction, reuse, recycling and disposal of waste building and civil infrastructure materials to achieve compliance with ecologically sustainable development.

1.2 Statutory requirements

Compliance with the following as applicable:

- *Environmental Protection (Waste Management) Policy 2000*
- *Environmental Protection (Waste Management) Regulation 2000*

1.1 Reference guideline

Code of Best Practice for Waste Processing in the Construction and Demolition Industries, Waste Management Association of Australia.

2. Waste reduction/resource recovery

2.1 Project waste reuse/recycling

The contractor is to maximise the reuse or recycling of project waste. In accordance with the policy's initial recycling/reuse target range of a minimum of 40% of waste materials by weight for building and infrastructure projects shall be reused or recycled. This percentage refers to the weight of total material that would otherwise be disposed of to landfill.

The contractor is to develop and implement a Recycling Management Plan to ensure that recycling/reuse targets are achieved (refer to Clause 3 for details) and keep detailed waste tracking records (refer to Clause 5 for details).

Where it is deemed that the target of 40% cannot be achieved under the contractor's Recycling Management Plan, then best practice (as defined in **Appendix 1**) recycling options shall be adopted. The contractor is to seek approval from the superintendent's representative for the Recycling Management Plan.

The contractor shall liaise with the local authority, commercial recycling organisations and community groups where the potential for recycling is evident.

2.2 Material Separation

An on-site waste management area(s) for sorting and segregating wastes should be established where practicable and nominated in the Recycling Management Plan.

The on-site sorting area should include colour-coded and clearly marked containers for various materials. Storage facilities (bins and skips) may be provided for the storage of:

- | | | |
|---|--|--|
| <ul style="list-style-type: none">• cardboard• timber• metal• soft plastic• polystyrene | <ul style="list-style-type: none">• insulation• concrete• glass• bricks• ceiling tiles | And possibly for: <ul style="list-style-type: none">• carpet• plaster• fabric• other materials as applicable to the project works |
|---|--|--|

Where on-site sorting is impractical or where the waste contractor's service involves off-site sorting, then details of the off-site recycling procedures and results must be provided to the superintendent by the waste contractor.

The applicability of items such as furniture, fittings and fixtures to the policy will be clarified in the guideline material to be prepared prior to implementation of the policy in full consultation with agencies.

2.3 Disposal of waste

In accordance with the reuse/recycling target in Clause 2.1, no more than 60% by weight of waste from building and infrastructure projects is to be disposed of to landfill. This project waste, including site refuse and any solid or liquid contaminants resulting from work under the contract, shall be disposed of in accordance with all relevant statutory and local authority requirements.

3. Project Recycling Management Plan

3.1 Requirement

The contractor is to prepare a Recycling Management Plan for the project to achieve the target outlined in Clause 2.1.

3.2 Submission

A Recycling Management Plan is to be submitted within seven (7) days of acceptance, or such later time as may be agreed, to the principal's satisfaction in conjunction with environmental legislative requirements.

Agencies are to obtain written acceptance by the superintendent of the Recycling Management Plan prior to proceeding with any works on the project site.

3.3 Details

The Recycling Management Plan shall provide detailed waste management strategies for the project and shall include appropriate strategies to be implemented by sub-contractors. The following items are to be addressed, where applicable, in the Recycling Management Plan:

- nomination of an appropriately experienced individual to act as a waste management officer and oversee all waste management practices and processes including training, supervision, reporting and auditing during the contract works
- nomination of waste sub-contractors for recycling and the timing of collection services
- waste management training and induction of employees and sub-contractors
- strategies and methodology for minimising resource use and waste generation
- strategies and practices for the segregation, containment, storage, collection and disposal mechanisms for each category of waste
- site plan indicating the location of waste management areas for sorting and segregating waste
- a commitment to the reuse/recycling target (refer to Clause 2.1) and an indication of how it will be achieved
- measurement techniques for the weight (or volume where appropriate) of each material (totals and amount disposed of, recycled or reused)
- confirmation that the waste streams identified for recycling are able to be recycled in a cost efficient manner and that local recyclers are available and prepared to take the materials
- trade-specific waste management strategies, sub-plans and audit procedures
- specific management measures for hazardous and liquid wastes where applicable (although hazardous waste is not specifically included in the recycling policy and is not subject to the target as per Clause 2.1)
- recording and reporting procedures for waste management (refer to Clause 5) including copies of templates to be used (refer to sample templates **Appendices 3A and 3B** for guidance)
- waste management monitoring and auditing procedures (for contractor and sub-contractors)
- any other items considered necessary to adhere to the waste management hierarchy.

The policy recognises that, in some circumstances, it will be unrealistic to include comprehensive detail on all the above components in a Recycling Management Plan.

4. Training

4.1 Requirement

The contractor shall conduct training of all relevant work personnel, including sub-contractor personnel, engaged on the site to ensure satisfactory understanding of all waste management protocols to be practised or implemented as part of its responsibilities under the contract, in accordance with the Recycling Management Plan.

Sub-contractors are required to adhere to the Recycling Management Plan.

5. Recordkeeping and reporting

5.1 Requirement

Records must be kept and maintained to demonstrate the actual percentage (by weight) of each material reused/recycled/disposed and evidence of where these were utilised/sold/disposed.

5.2 Submission requirements

Results are to be made available to the superintendent and reported on a monthly basis (where applicable) in the form of a Waste Management Performance Report. Records for each sub-contract and the overall contract must be kept by the contractor to include:

- the weight (or volume where applicable) of all outgoing loads for each waste/resource stream generated
- the actual percentage (by weight) of each waste/resource stream reused, recycled or dumped
- the destination of each waste stream (i.e. reuse application, licensed resource recovery/recycling facility, or landfill) and name of recycler/waste contractor
- supporting evidence including resource recovery/recycling facility and landfill receipts etc
- a summary of monthly results (where applicable) provided to the superintendent in the form of a monthly Waste Management Performance Report, which includes:
 - o updates on the waste management performance (percentage of waste reused/recycled) to date in comparison to requirements (40% by weight)
 - o evidence of total waste generated and total waste disposed to landfill to date
 - o measures to improve performance if requirements are not being achieved (Recycling Management Plan to be updated as required).
- all waste management records, which are to be retained and provided to the superintendent on practical completion with an overall waste management performance summary report for all project activities clearly indicating the percentage of project waste materials (by weight) which were reused or recycled
- certification (signed and dated) of all results and reports by the nominated waste management officer and indicating that the prescribed waste management requirements in Clauses 2.1 and 2.3 have been met.

6. Project waste auditing

Environmental Audits of the works with respect to the Recycling Management Plan as accepted by the superintendent for the project may be undertaken by the superintendent for compliance with this plan and statutory requirements.

Sample waste management templates

Appendix 3A:

Waste management record

Date	Author	Material	Source	Quantity weight Kg/t	Quantity Volume m3	% Reused	% Recycled	% Landfill	Target achieved Y/N	Receipt details	Certified by WM Officer (sign)	Comments

Appendix 3B:

Monthly waste management summary report

Material	Monthly results % reused	Monthly results % recycled	Monthly results % landfill	Results to date % reused	Results to date % recycled	Results to date % landfill	Comments
Total							