



Resource Use & Waste

Material and energy efficiency, waste streams and disposal.

How to use this handbook

This volume is the practitioner (site and technical) reference for the Resource Use & Waste factor. It sets out what Resource Use & Waste governs, every assessment element with its own process and controls, the Queensland and Commonwealth instruments that apply, and the primary metric for each element. It is decision support, not legal advice or a substitute for a site-specific assessment — confirm every regulatory point against the current instrument and, where a threshold is close or a critical exception applies, obtain specialist and legal review.

FIELD	DETAIL
Volume	10 of 17 — Environmental Knowledge Handbooks
Factor	Resource Use & Waste
Jurisdiction	Queensland, Australia
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Prepared by	QTEN — Queensland Technical Excellence Network
Review	SME, spatial and legal review before reliance

Executive overview

Resource use and waste are where environmental performance meets the bottom line: the waste levy, disposal cost and material efficiency all move margin, and mismanaged waste is a fast route to enforcement. In Queensland the framework is the Waste Reduction and Recycling Act 2011 and its regulation, sitting alongside the Environmental Protection Act 1994 for waste-related environmentally relevant activities. The site-manager task is to design out waste, classify and track streams correctly, keep resources in use, and dispose only to lawful, receipted destinations.

Scope

Resource Use & Waste resolves into four secondary factors — Resource Use and Productivity; Waste Prevention and Circularity; Waste Streams and Risks; Waste Operations and Governance — and twenty assessment elements. Every element is set out below with its own process and controls and its primary decision metric; identifiers are shared with the companion Knowledge System workbook and the platform calculators.

Assessment elements & process

Each assessment element below carries what it governs and its key pressures, the appropriate site process and controls, and the primary metric that measures it. Work every element that your project engages.

ASSESSMENT ELEMENT	WHAT IT GOVERNS & KEY PRESSURES	PROCESS & CONTROLS
Material Use and Resource Productivity <i>Material productivity</i>	Material use and resource productivity. Pressures: over-ordering, off-cuts, inefficiency.	Set productivity targets; design and order to minimise material; measure output per unit; improve.
Water Use and Efficiency <i>Water-use intensity</i>	Water use and efficiency. Pressures: high consumption, leaks, inefficient processes.	Baseline water use; set intensity targets; reduce and reuse; monitor and correct.

ASSESSMENT ELEMENT	WHAT IT GOVERNS & KEY PRESSURES	PROCESS & CONTROLS
Energy Use and Efficiency <i>Energy intensity</i>	Energy use and efficiency. Pressures: high consumption, inefficient plant.	Baseline energy; set intensity targets; efficiency and electrification; monitor and improve.
Renewable and Recycled Inputs <i>Renewable and recycled input share</i>	Renewable and recycled input share. Pressures: reliance on virgin, high-impact inputs.	Specify renewable and recycled inputs; verify content; track input share; increase over time.
Sustainable Procurement and Supply-chain Resources <i>Procurement circularity coverage</i>	Sustainable procurement of resources. Pressures: unsustainable sourcing, weak specifications.	Build circular and sustainability criteria into procurement; verify supplier claims; track coverage.
Waste Prevention and Design <i>Waste avoided at source</i>	Waste prevention and design. Pressures: over-ordering, packaging, rework.	Apply the waste hierarchy at design and procurement; reduce packaging and off-cuts; measure waste avoided.
Reuse, Repair and Life Extension <i>Reuse and life-extension rate</i>	Reuse, repair and life extension. Pressures: disposal by default, no reuse channels.	Set reuse and repair channels; extend asset life; measure reuse and life-extension rate.
Recycling and Resource Recovery <i>Resource recovery rate</i>	Recycling and resource recovery. Pressures: contamination, poor segregation.	Segregate on site; use approved recyclers; check contamination; measure recovery rate.
Industrial Symbiosis and Material Exchange <i>Beneficial material exchange</i>	Industrial symbiosis and material exchange. Pressures: by-products landfilled.	Identify beneficial by-product exchanges; establish partners; track beneficial exchange.
Circular Business Models and Product Stewardship <i>Circular service and stewardship coverage</i>	Circular business models and product stewardship. Pressures: linear models, no stewardship.	Adopt service and stewardship models; participate in schemes; track coverage.
General and Municipal Waste <i>General waste diversion</i>	General and municipal waste diversion. Pressures: poor segregation, contamination.	Segregate general waste; provide labelled bins; check contamination; measure diversion.
Construction and Demolition Waste <i>C&D resource recovery rate</i>	Construction and demolition waste recovery. Pressures: mixed loads, disposal by default.	Segregate C&D streams; recover concrete, metals, timber; use approved facilities; measure recovery rate.
Commercial and Industrial Waste <i>C&I waste intensity and recovery</i>	Commercial and industrial waste intensity and recovery. Pressures: high intensity, low recovery.	Reduce C&I waste intensity; segregate and recover; monitor intensity and recovery.
Regulated and Hazardous Waste <i>Regulated waste tracking compliance</i>	Regulated and hazardous waste tracking compliance. Pressures: misclassification, unlicensed transport.	Classify each stream; use licensed transporters; track consignments; dispose to compliant facilities; keep receipts.
Organic, Plastic, E-waste and Priority Wastes <i>Priority-waste recovery and risk status</i>	Organic, plastic, e-waste and priority wastes. Pressures: priority-waste risk, poor recovery.	Segregate priority wastes; use stewardship and recovery pathways; manage risk; track recovery and status.
Waste Classification and Tracking <i>Waste classification confidence</i>	Waste classification and tracking confidence. Pressures: wrong classification, incomplete tracking.	Classify to the regulation; document the basis; track movements; assure classification confidence.
Waste Storage, Handling and Transport <i>Waste storage and transport compliance</i>	Waste storage, handling and transport compliance. Pressures: spills, contamination, unlicensed transport.	Store and handle to standard; bund and cover; use licensed transport; verify compliance.

ASSESSMENT ELEMENT	WHAT IT GOVERNS & KEY PRESSURES	PROCESS & CONTROLS
Waste Facilities and Disposal <i>Facility performance and residual disposal</i>	Waste facilities and disposal performance. Pressures: non-compliant facilities, residual disposal.	Use appropriately licensed facilities; verify acceptance; minimise residual disposal; keep receipts.
Waste Levy, End-of-Waste and Compliance <i>Levy and end-of-waste compliance</i>	Waste levy, end-of-waste and compliance. Pressures: levy exposure, misapplied exemptions.	Manage levy exposure; apply end-of-waste codes correctly; document; verify compliance.
Waste Performance, Reporting and Adaptive Management <i>Waste reporting completeness and improvement</i>	Waste performance, reporting and adaptive management. Pressures: incomplete reporting, no improvement.	Report diversion and levy; review; correct and improve; adapt the waste-management plan.

Regulatory mapping

The instruments most often engaged for Resource Use & Waste. Confirm currency and application to the specific site and activity before relying on any entry.

INSTRUMENT	JURIS.	WHAT IT DOES	TYPICAL TRIGGER
Waste Reduction and Recycling Act 2011	Qld	Waste hierarchy, levy, and waste-management duties.	Generating, handling or disposing of waste.
Waste Reduction and Recycling Regulation 2011	Qld	Levy zones, exemptions and reporting.	Disposing of levyable waste.
Environmental Protection Act 1994	Qld	Waste-related ERAs; regulated-waste tracking; general environmental duty.	A waste ERA or regulated-waste movement.
Environmental Protection Regulation 2019	Qld	Regulated-waste categories and tracking requirements.	Transporting or receiving regulated waste.
National Waste Policy Action Plan	Cth	National waste-reduction and recovery targets.	Aligning waste and recovery performance.

Assurance & evidence

- **Source currency.** Confirm the instruments, criteria and trigger values cited are current and correctly applied to the site and activity.
- **Records.** For each element engaged, retain the assessment, the controls applied, monitoring against the metric, and any statutory notifications — the evidence that the process was followed.
- **Independent review.** Interpretations, threshold decisions and critical exceptions are reviewed by a suitably qualified person before reliance.

TALK TO QTEN

Managing resource use & waste on a live project? QTEN helps Queensland clients turn this handbook into a defensible, evidence-backed position — scoping, assessment, controls, approvals and review. Bring us your site and we will help you get it right, and prove it.
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