Department of Environment, Science and Innovation

Waste Reduction and Recycling Plan

2024–2030

Queensland Government

Prepared by: Corporate Services, Department of Environment, Science and Innovation.

© State of Queensland, 2024.

The Queensland Government supports and encourages the dissemination and exchange of its information. This work is licensed under a Creative Commons Attribution 4.0 International License.

Under this licence you are free, without having to seek our permission, to use this publication in accordance with the licence terms. You must keep intact the copyright notice and attribute the State of Queensland as the source of the publication.

For more information on this licence, visit https://creativecommons.org/licenses/by/4.0/

If you need to access this document in a language other than English, please call the Translating and Interpreting Service (TIS National) on 131 450 and ask them to telephone Library Services on +61 7 3170 5470.

This publication can be made available in an alternative format (e.g. large print or audiotape) on request for people with vision impairment; phone +61 7 3170 5470 or email <library@des.qld.gov.au>.

Date of Publication – July 2024

Foreword

As the Department of Environment, Science and Innovation, we are committed to being effective leaders in protecting, restoring and promoting Queensland's natural environment, cultural heritage, and fostering an innovative economy. Our *Strategic Plan 2023–27* sets out six objectives, one of which is to grow the circular economy.

The department administers the Queensland Government's *Waste Reduction and Recycling Act 2011* and the State's *Waste Management and Resource Recovery Strategy*. We also have lead responsibility for a range of policies and programs that support the development of the circular economy and boost rates of recycling and landfill diversion. This delivers a range of environmental and economic benefits, including creating new jobs and businesses.

It is important that we act as an exemplar in our everyday operations. We deliver a broad range of services across Queensland, and this includes managing the protected area estate and large asset base. A such, we generate substantial demand for a range of materials. This presents significant opportunities to play a leadership role in the circular economy. Across our operations, we also have a responsibility to design out waste, and where this cannot be achieved, optimise the level of reuse or recycling.

To achieve this, the Department of Environment, Science and Innovation *Waste Reduction and Recycling Plan 2024-2030* has been developed to guide further actions over the next six years. We made significant progress in the last five years in reducing waste generation per head and increasing our reuse and recycling rates. However, there is still much more to do. This Plan sets the strategic direction for our efforts and collectively, we are committed to its delivery.

Jamie Merrick
Director-General
Department of Environment, Science and Innovation

Contents

Foreword iii
1. Purpose of Plan 1
2. Scope 1
2.1 Alignment to related initiatives 1
2.2 Timeframe 1
2.3 Limits to operational control 2
3. Authority 2
4. Definition of Waste 2
5. Waste generated by departmental activities 2
6. Background of Plan 3
7. Approach 3
7.1 Enhancing outcomes via targeted Waste Reduction and Recycling Action Plans 3
7.2 Guiding principles 4
7.2a Waste and resource management hierarchy 4
7.2b Waste and resource management principles 5
7.3 Continuous Improvement 6
8. Waste reduction and recycling targets 7
9. Reporting 7
10. Review of this Plan 7
11. Key deliverables 2024-2030 7
12. Related documents 8

1. Purpose of Plan

The Department of Environment, Science and Innovation (DESI) Waste Reduction and Recycling Plan (the Plan) sets the overall direction for the prevention and management of waste within the department from 2024 to 2030.

The primary focus of the Plan is to implement a range of activities that will either design out or reduce waste generated by the department in the delivery of its functions and to increase the reuse and recycling rates of surplus materials. Acting as an exemplar is a key contribution we make to the waste management strategy for the State.

The Plan aligns with Queensland's Waste Management and Resource Recovery Strategy (the Strategy), which provides the strategic framework for Queensland to become a zero-waste society, reducing waste, where waste is avoided, reused and recycled to the greatest possible extent.

The Strategy focuses on transitioning Queensland to achieve the principles of a circular economy to help retain the value of material in the economy for as long as possible. It provides the framework to help deliver coordinated, long-term, and sustained growth for the recycling and resource recovery sector while reducing the amount of waste produced and disposed of by promoting more sustainable waste management practices for businesses, industry and households.

Within the Strategy, long-term targets for 2050 have been established:

a. 25% reduction in household waste
b. 90% of waste is recovered and does not go to landfill
c. 75% recycling rates across all waste types

The Plan considers various waste action plans that outline key priorities for avoiding, diverting, and recycling waste; for instance, Queensland's Plastic Pollution Reduction Plan and the draft Queensland E-Products Action Plan 2023–2033. One key action plan is the Queensland Organics Action Plan 2022–2032, which sets the goal that by 2030, Queensland will:

a. Halve the amount of food waste generated
b. Divert 80% of the organic material generated from landfill
c. Achieve a minimum 70% recycling rate for organics.

With these in mind, the key objectives of this Plan are to:

- establish key roles and networks
- empower all staff to engage in appropriate waste elimination and waste management behaviour
- drive behavioural change across the organisation
- develop targeted, locally based Action Plans aimed at
    - waste avoidance
    - waste reduction
    - maximising reuse and recycling where reduction is not an option
    - managing priority wastes
- support transparency and continuous improvement.

These objectives are supported by detailed deliverables outlined in section 11 and will be implemented, monitored and reported on by Corporate Services.

2. Scope

The Plan applies to all divisions of the department. It provides a set of guiding principles for waste elimination and management in the context of the department's key business activities. Furthermore, it sets out key objectives, specific deliverables, together with clear waste reduction and recycling targets.

2.1 Alignment to related initiatives

It is intended that the Plan will contribute to the implementation of the Strategy. The Plan will also align with related sustainability initiatives led by the department, including its contribution to the Queensland Climate Action Plan.

2.2 Timeframe

This Plan will be implemented over the six-year period from 1 July 2024 to 30 June 2030. The Plan covering the previous period has been reviewed and updated, with actions identified in section 11 to reflect DESI's priorities.

2.3 Limits to operational control

DESI operates from approximately 133 locations Statewide. In many of these locations, the department has full operational control of the site and can make decisions on most – if not all – aspects of waste management.

There are, however, locations where the department's operational control is limited. Examples include sites where the department is:

- a tenant in a government-owned building
- a tenant in a privately leased premise, or
- an occupant in a premise owned by another state entity.

In these locations, departmental staff are expected to comply with waste and recycling arrangements put in place by building management. Notwithstanding this, we can play our part by designing out waste, utlising all available channels for reuse and recycling, and where necessary advocating for improved sorting and collection services with our host organisations.

3. Authority

The *Waste Reduction and Recycling Act 2011* (the Act) requires that each State entity prepare, adopt and implement a Waste Reduction and Recycling Plan. This Plan addresses the specific requirements of Part 3 of the Act.

4. Definition of Waste

The Act defines waste as anything that—

(a) is left over, or is an unwanted by-product, from an industrial, commercial, domestic or other activity; or

Example—

Abandoned or discarded material from an activity is left over, or is an unwanted by-product, from the activity.

(b) is surplus to the industrial, commercial, domestic or other activity generating the waste.

5. Waste generated by departmental activities

DESI performs a diverse range of functions on behalf of Queenslanders, including:

- conserve and restore Queensland's unique biodiversity, heritage and protected areas
- enable job creation and the growth of new industries and environmental markets
- protect World Heritage areas, including the Great Barrier Reef
- strengthen and harness Queensland's scientific excellence
- deliver a world-class environmental, heritage and biodiscovery regulatory system.

Upholding principles of flexibility, innovation and efficiency within its procedures, the department allows for flexible work arrangements among its staff members and maintains a strategically distributed workforce across the State to ensure the efficient delivery of its services.

The department's broad range of operations leads to the significant use of materials and the potential to generate diverse waste streams, with characteristics typical of all three primary waste streams (municipal solid waste; commercial and industrial; and construction and demolition). Furthermore, the geographical dispersion of operations requires a tailored approach: regional waste management arrangements should consider the recycling and resource recovery networks and infrastructure available locally.

For the purposes of this Plan, the department's activities have been divided into three broad categories: office-based work environments, non-office-based work environments, and facilities used by the general public.

Office-based activities generate a number of typical material streams regardless of geographical location (e.g. paper, cardboard, stationery, e-waste and kitchen waste from meals and drinks consumed by staff during the workday).

By contrast, non-office-based activities (e.g. work undertaken at scientific facilities and in national parks) generate distinctive material streams depending on the geographical location and functions undertaken at each site.

The department also manages a range of public-facing services and facilities across the State (e.g. national parks and visitor centres), each with differing levels of operational control over the waste and recycling behaviours of

members of the public. Accordingly, the material streams generated and their destinations differ by each facility. This requires a tailored approach to reducing waste and increasing the circulation of materials in the economy.

In light of DESI's varied material flows and waste profile, the Plan focusses on the feasible avoidance and reduction of the most common waste streams across the department. It provides templates and tools to support the development of targeted Waste Reduction and Recycling Action Plans based on division, location or function-specific priorities.

Due to the unique nature of DESI's material flows and waste profile, it is typically categorised into the following broader categories:

Paper	Wastepaper includes various types of paper products such as office paper, newspapers, magazines, and cardboard packaging. It is a common recyclable material.
Co-mingle	Mixed recyclable materials, such as plastic containers, glass bottles, and aluminium cans, are collected together for recycling.
Organic	Food scraps, coffee beans, plant material.
Confidential	Printed materials containing personal or sensitive information that requires special handling to maintain confidentiality.
Landfill	Items intended to go to landfill and cannot be recycled, composted, or otherwise recovered for reuse.

6. Background of Plan

The Plan largely draws on material and waste data gathered from DESI's office locations. This produced an understanding of the typical types and quantities of materials used and waste generated in office-based settings. While there may be limitations in data and findings of these audits, they still provide reliable indications of typical material streams and waste separation behaviours and highlights opportunities for improvement.

The Plan also aims to build on recent accomplishments, which include (but are not limited to):

- improved waste elimination behaviours demonstrated by staff
- further upgrades of user-friendly, site-specific signage to boost reuse and recycling
- targeted delivery of staff awareness and education sessions
- improvements in waste avoidance, recycling and segregation practices
- improved provision of reuse and recycling bins within several office locations.

7. Approach

7.1 Enhancing outcomes via targeted Waste Reduction and Recycling Action Plans

Where appropriate, targeted Waste Reduction and Recycling Action Plans (Action Plans) will be developed to complement the specific deliverables outlined in this Plan. Action Plans will be aimed at addressing specific issues, such as:

- a particular material stream (e.g. reducing paper waste)
- location-specific waste management (e.g. educating staff at a given location on the appropriate use of their recycling facilities)
- a particular departmental function (e.g. reducing the amount of waste generated from a particular function)
- a particular departmental activity (e.g. avoiding or reducing waste events or operations), or
- a combination of the above.

This approach enables the department to be flexible in responding to emerging priorities and localised issues and to facilitate continuous improvement throughout the life of this Plan.

Action Plans will be developed in consultation with local stakeholders and the DESI Waste Reduction and Recycling Network via the Community of Practice.

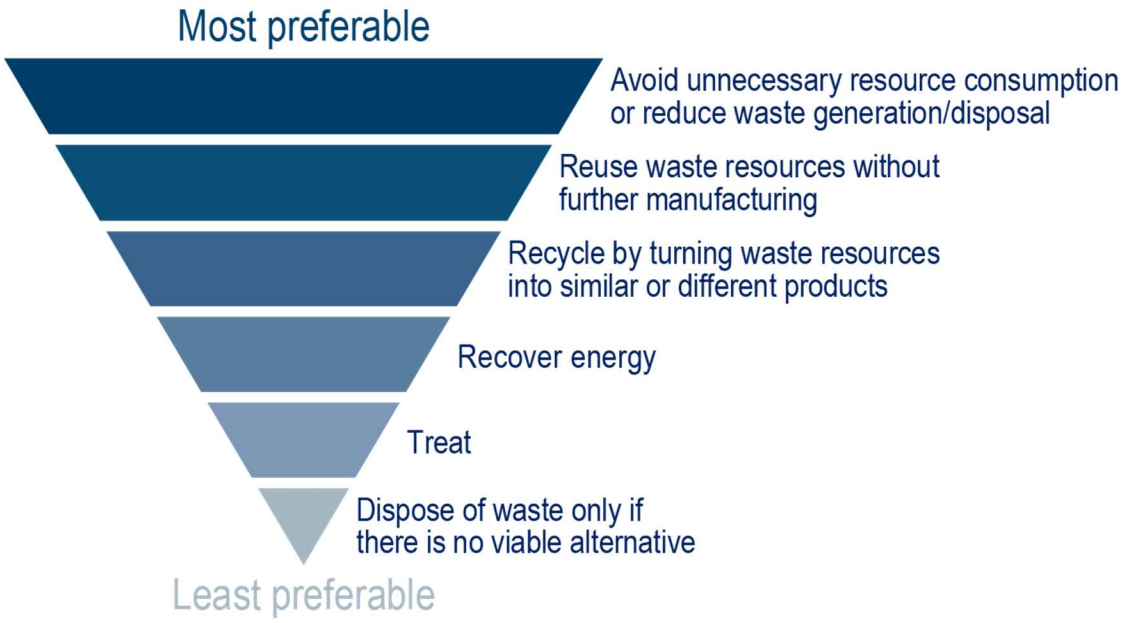
7.2 Guiding principles

Section 134 of the Act states that the Plan should be developed with regard to:

- the waste and resource management hierarchy, and
- waste and resource management principles.

7.2a Waste and resource management hierarchy

The *Waste and Resource Management Hierarchy* provides a clear order of preference for waste and resource management activities:



Transitioning to a Circular Economy for Waste

Section 3 of the Act's objectives includes promoting and facilitating Queensland's transition to a circular economy.

As Section 9A of the Act states, "The *circular economy principle* is the principle that, to promote waste avoidance and minimise the impact of waste on the environment and human health, all products and materials should be kept in the economy for as long as they have value or remain useful."

Moving towards a circular economy in waste management involves shifting away from the traditional "take-make-dispose" linear model to a more sustainable framework where resources are continually reused and recycled. This approach aims to keep materials within the economic cycle for as long as possible, minimising waste and reducing the reliance on extracting new raw materials.

It encompasses designing products for durability, reparability, and recyclability; encouraging practices like sharing, leasing, and reusing; and creating closed-loop systems where waste becomes a resource for new products.

Transitioning to a circular economy in waste helps reduce environmental impact, conserve natural resources, and create economic opportunities through innovative business models.

The circular economy principle can be applied to many of the waste streams generated by DESI through the department's typical operations including, but not limited to, paper and cardboard, food waste, e-waste and plastic waste.

The Plan outlines a strategy for DESI to integrate circular economy principles into our operational processes for waste management and the handling of products and materials at their lifecycle's end.

7.2b Waste and resource management principles

DESI's waste management decisions will be guided by the following principles.

	Definition	Examples of waste reduction and recycling activities
The *polluter pays principle*	States that all costs associated with the management of waste should be borne by the persons who generated the waste. The costs associated with the management of waste may include the costs of minimising the amount of waste generated; containing, treating, and disposing of waste, and rectifying environmental harm caused by waste.	Educate staff on the consequences of improper waste disposal. For instance, if co-mingled recycling bin is contaminated, the entire contents will be sent to landfill. This results in both environmental harm and additional expenses for the department.
The *proximity principle*	States that waste and recovered resources should be managed as close as possible to the source of generation.	Review waste management arrangements to prioritise local service providers where possible. For instance, implementing on-site composting at an office reduces transportation needs, promoting sustainable waste management.
The *product stewardship principle*	States that there is a shared responsibility between all persons who are involved in the life cycle of a product for managing the environmental, social and economic impact of the product.	Review procurement procedures. Select suppliers offering products designed for durability, repairability, and recyclability, aligning with product stewardship principles to optimise resource use and minimise waste.

Finally, waste elimination, reuse, recycling and management initiatives within the department are to reflect:

- an evidence-based approach, led by the best available information
- a risk-based approach, reflective of the highest priorities within the department (informed by the insights of Waste Reduction and Recycling Network and divisional heads)
- flexibility of approach, so that the department is able to respond to new information and changing priorities
- sound planning, monitoring, and reviewing of outcomes
- balance between benefits to the environment and the appropriate use of departmental resources, so that activities are sustainable and complement the implementation of other business-critical work programs and/or the wider public interest.

7.3 Continuous Improvement

DESI's initiatives specified in section 11 align with the cycle of continuous improvement, as illustrated below, driving ongoing enhancements in waste management practices.

Cycle of continuous improvement in waste management

8. Waste reduction and recycling targets

The Act requires DESI to set waste reduction and recycling targets for the waste generated by the department in conducting its operations. These targets are as follows:

- the amount of waste generated per DESI employee will decrease to 35 kilograms per person by June 2027 and to 30 kilograms per person by June 2030
- the average waste diversion rate for the whole of DESI will increase to a minimum of 55% by June 2027 and to a minimum of 60% by June 2030, with the intent to be close to or at 70%.

These targets will assist in DESI contributing to the 2050 municipal solid waste targets specified in the Strategy of a waste reduction of 25%, waste diversion of 90% and recycling rate of 75%.

Further, by eliminating reducing the quantity of waste and increasing recycling, DESI will be able to realise co-benefits. These include reductions in greenhouse gas emissions, and the potential for odour and noise, job creation in the circular economy, and a reduction in costs for waste management.

9. Reporting

DESI will produce an annual report on its waste management activities in accordance with the requirements of section 148 of the Act. The report will include progress made against the activities set out in the Plan and the Strategy's targets.

10. Review of this Plan

In accordance with section 136 of the Act, the Plan will be formally reviewed every five years (at a minimum) and will be amended on an as-needs basis to accommodate emerging priorities and operational changes.

11. Key deliverables 2024–2030

The following table outlines the key objectives and deliverables of the department:

Action	Timeframe for delivery
Targeted education on behavioural change Implement a targeted education campaign aimed at elevating waste management awareness and driving behavioural change within DESI. The campaign's actions may include: – prepare strategic internal communications to engage employees and reinforce key messages – conduct evaluations of campaign outcomes and integrate the resulting insights into future initiatives.	30 June 2025
Review waste in each of DESI's major tenancies – Initially focussing on sites with poor waste performance, conduct a review at each major leased site to ensure that there is appropriate waste infrastructure in place to facilitate the recycling of waste streams and improve DESI's diversion rates – Identify waste streams within the building and implement local strategies to reduce landfill waste and improve recycling rates – Measure and review the outcomes regularly, refining strategies in an ongoing cycle of improvement.	30 June 2025

Action	Timeframe for delivery
Continue the transition to a Circular Economy for Waste – Encourage strategic procurement practices that prioritise vendors supporting circular economy principles, to foster a sustainable supply chain – Identify options and opportunities to enhance our contribution to the circular economy, focusing on waste reduction, reuse and recycling initiatives – Undertake a major departmental material flow analysis to identify new initiatives at scale – Advance the departments implementation of circular economy principles and programs and build staff, partner and visitor awareness of circular economy opportunities and benefits.	30 June 2026
Enhance data driven management, technology integration and information sharing – Improve data collection and data analytics to identify opportunities for waste elimination and increase reuse and recycling – Continue to explore and utilise latest behavioural insights to improve progress – Conduct training for staff and stakeholders on new materials management systems and technologies.	30 June 2027
Enhance partnerships and collaboration – Identify opportunities to promote increased participation and partnerships in waste initiatives (e.g. Simply Cups and the Containers for Change recycling programs) to improve waste management outcomes – Sustain active collaboration with DESI's waste policy team to ensure our waste management deliverables are consistent with policies, strategies and legislative requirements – Utilise the Community of Practice within the DESI Waste Reduction and Recycling Network to bolster knowledge sharing and promote joint innovation, focusing on practical solutions for waste reduction, diversion, and recycling.	Ongoing
Clear Desk Procedure – Comply with DESI's Clear Desk Procedure to reduce the requirement to physically store paper after it has been made electronic – Encourage staff to have a clear desk and reduce paper consumption – Design out unnecessary materials, and increase shared use of office and other assets	Ongoing
Adhere to our legislative obligations under the Act – Review progress against the Plan and Action Plans – Produce a Waste Reduction and Recycling Annual Report on behalf of the Department.	Annually by 31 August

12. Related documents

- *Waste Reduction and Recycling Act 2011*
- Waste Management and Resource Recovery Strategy
- Queensland Waste Avoidance and Resource Productivity Strategy 2014-2024
- Tackling plastic waste: Queensland's Plastic Pollution Reduction Plan
- DRAFT Queensland E-Products Action Plan 2023-2033

- Queensland Organics Action Plan 2022 - 2032
- Queensland Climate Action Plan
- Clear Desk Procedure