Title	Develop a programme for measuring and monitoring resource efficiency and cleaner production		
Level	5	Credits	30

Purpose	This unit standard is for people working in business or government whose role it is to promote, support, and encourage the implementation of sustainable management practices and cleaner production. People credited with this unit standard are able to: demonstrate knowledge of the measurement and monitoring of resource efficiency and cleaner production; develop a programme for measuring the resource efficiency and cleaner production of a product; and develop a programme to monitor the resource efficiency and cleaner production of a product.

Classification	Zero Waste > Zero Waste Theory and Practice

Available grade	Achieved

Guidance Information

1 References relevant to this unit standard include but are not limited to:
The New Zealand Waste Strategy: Reducing Harm, Improving Efficiency 2010 Ministry for the Environment, available at http://www.mfe.govt.nz;
AS/NZS ISO 14001:2016 *Environmental management systems – Requirements with guidance for use*, available at http://www.standards.co.nz.

2 Definition
Cleaner production is defined by United Nations Environment Programme as: 'the continuous application of an integrated preventive environmental strategy to processes, products, and services to increase overall efficiency, and reduce risks to humans and the environment. Cleaner Production can be applied to the processes used in any industry, to products themselves and to various services provided in society'.

3 For this unit standard *industry guidelines* refer to publications provided by government and business organisations that may include but are not limited to – the *Business Guide to Sustainable Development Reporting*, available for free download at www.sbc.org.nz.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the measurement and monitoring of resource efficiency and cleaner production.

Performance criteria

1.1   Measurement is described in terms of scope and types required to quantify resource efficiency and cleaner production.

   Range   scope – raw materials, production processes, packaging, distribution, disposal; types may include but are not limited to – quantities, costs, usage, distance, change, valuation, ranking, magnitude, normalisation of discrepancies; evidence is required of one type for each extent.

1.2   Measurement and monitoring are described in terms of importance of staff competence and robust systems to ensure validity of data.

1.3   Resource efficiency monitoring is described in accordance with industry guidelines and legislation.

   Range   three industry guidelines.

1.4   Environmental monitoring is described in terms of key indicators of impacts on the environment.

   Range   key indicators – global warming, resource depletion, human toxicity, eco-toxicity, one other; impacts – potential, actual.

Outcome 2

Develop a programme for measuring the resource efficiency and cleaner production of a product.

Performance criteria

2.1   The programme determines the sustainability, toxicity, and locality of raw materials in accordance with industry guidelines and quantifies the amount of raw material in the finished product.

   Range   sustainability includes harvesting of finite resource and use of renewable resources.

2.2 The programme measures the resource efficiency of manufacturing processes in accordance with industry guidelines.

    Range   resource efficiency includes but is not limited to – conservation of materials, energy, and water, environmental management or cleaner production practice, elimination of hazardous materials, reuse and recycling of process materials.

2.3 The programme measures the resource efficiency of product packaging.

    Range   includes but is not limited to packaging – type, amount, source.

2.4 The programme measures the resource efficiency of product distribution.

    Range   includes but is not limited to – comparison of transport options for minimising greenhouse gas emissions.

2.5 The programme quantifies the resource efficiency of the product in relation to consumer use.

    Range   expected lifetime of product, product reuse and recycling options; may include but is not limited to – ability to be repaired, after sale energy consumption.

2.6 The programme quantifies the impact of product disposal.

    Range   disposal – for reuse or recycling, residual to landfill.

Outcome 3

Develop a programme for monitoring the resource efficiency and cleaner production of a product.

Performance criteria

3.1 The monitoring programme is based on relevant and reliable data measured in accordance with industry guidelines.

    Range   relevance and reliability may be evidenced by following industry guidelines and/or the Solid Waste Analysis Protocol and/or ISO standards.

3.2 The programme ensures the validity and reliability of monitoring data collection and recording in accordance with industry guidelines.

    Range   includes but is not limited to – staff competence, measuring equipment, recording system.

3.3   The programme provides information for management decisions that result in continued resource efficiency and clean production.

        Range   may include but is not limited to – regular reporting, staff feedback, monitoring system audit.

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 January 2007	31 December 2025
Rollover and Revision	2	28 March 2019	31 December 2025
Review	3	27 February 2025	31 December 2025

Consent and Moderation Requirements (CMR) reference	0014

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.