40603 Research and report on technologies and best practice in the resource recovery industry

Kaupae | Level	4
Whiwhinga | Credit	10
Whāinga | Purpose	This skill standard is intended for people who are already working in a resource recovery environment including resource recovery facilities, construction, or demolition worksites. They will be able to research and report on technologies and best practices relevant to the resource recovery industry. This skill standard aligns with the New Zealand Certificate in Resource Recovery (Level 4) with strands in Organic Materials Processing, Recovery and Recycling, and Metal Recycling [Ref: 2745].

Hua o te ako me Paearu aromatawai \| Learning outcomes and assessment criteria

Hua o te ako | Learning outcomes	**Paearu aromatawai** | Assessment criteria
1. Research technologies and best practices relevant to the resource recovery industry.	a. Gather information from a range of sources to research technologies relevant to the resource recovery industry.
	b. Gather information from a range of sources to research best practices relevant to the resource recovery industry.
2. Report on research into technologies and best practices relevant to the resource recovery industry.	a. Summarise research findings and conclusions in a report.
	b. Recommend strategies or actions to integrate researched technologies and/or best practices into a resource recovery environment.

Pārongo aromatawai me te taumata paearu \| Assessment information and grade criteria

Assessment specifications:

Research process includes definition of topic, formulation of research questions, collation of information, documentation of sources, analysis of information and summary of findings and conclusions.

Evidence presented for assessment against this skill standard may include oral, visual, video or written evidence.

Definitions

Best practice refers to the most efficient, effective, and ethical methods or techniques that are widely accepted within a specific industry or sector. Best practices often serve as benchmarks for organisations aiming to optimise performance and maintain a competitive edge in the market.

Range of sources refers to internet research (technical or organisational websites, journal articles, industry publications), library, speaking with subject matter experts or industry specialists, organisations or field research.

Technologies refer to the tools, equipment, systems, and processes used to efficiently reuse, recycle, or repurpose materials from waste streams. They encompass both mechanical and digital innovations, and aim to enhance sustainability, improve efficiency, and support circular economy principles.

Workplace procedures refer to organisation policies and procedures that are documented in memo, electronic, or manual format and available in the workplace. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, manufacturer's requirements, references, approved codes of practice, housekeeping standards, environmental considerations, on-site briefings, supervisor's instructions, and procedures to comply with legislative and local body requirements relevant to the resource recovery industry.

Ngā momo whiwhinga | Grades available

Achieved.

Ihirangi waitohu | Indicative content

Technologies and best practice

Ākonga/learners can choose a topic(s) from the suggestions below or create their own topic:

- Principles and practices of kaitikaitanga in relation to resource recovery.
- Principles and practices of circular economy in relation to resource recovery.
- Application of traditional or indigenous knowledge in a contemporary context.
- Procurement in a circular economy (for example, as applicable to construction sector).
- Reuse models and systems.
- Emerging or advanced technologies such as chemical recycling, enzyme technologies, urban mining, advanced sorting technologies.
- Continuous improvement processes.
- International best practices.
- Contribution of technologies and/or best practices to the effectiveness and sustainability of resource recovery operations.
- Impacts of technologies and/or best practices on operational performance.
- Strategies to facilitate the adoption of emerging technologies and/or best practices.
- Barriers or limitations to implementing emerging technologies and/or best practices.

Rauemi | Resources

Legislation, regulations and industry guidelines relevant to this skill standard include but are not limited to:

- Resource Management Act 1991.
- Waste Minimisation Act 2008.

Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this skill standard will take precedence for assessment purposes, pending review of this skill standard. Legislation can be accessed at: https://www.legislation.govt.nz.

Pārongo Whakaū Kounga | Quality assurance information

Ngā rōpū whakatau-paerewa | Standard Setting Body	Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council
Whakaritenga Rārangi Paetae Aromatawai | DASS classification	Service Sector > Resource Recovery > Resource Recovery Theory
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga | CMR	0014

Hātepe | Process	**Putanga** | Version	**Rā whakaputa** | Review Date	**Rā whakamutunga mō te aromatawai** | Last date for assessment
Rēhitatanga | Registration	1	24 April 2025	N/A
Kōrero whakakapinga | Replacement information	This skill standard replaced unit standard 22645.		
Rā arotake | Planned review date	31 December 2029		

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development at qualifications@hangaarorau.nz to suggest changes to the content of this skill standard.