

40591 Coordinate and monitor composting operations in a resource recovery environment

Kaupae Level	4
Whiwhinga Credit	20
Whāinga Purpose	<p>This skill standard is intended for people who are already working in a resource recovery environment which processes organic materials for compost production. People credited with this skill standard will be able to coordinate and monitor composting operations in a resource recovery environment.</p> <p>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].</p>
Whakaakoranga me mātua oti Pre-requisites	Learners/ākonga must demonstrate competence in workplace health and safety.

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

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Coordinate and monitor composting operations in a resource recovery environment.	a. Coordinate logistics relating to incoming and outgoing material streams.
	b. Evaluate suitability of feedstock considering site conditions, plant type and size, and compost product being produced.
	c. Follow mitigation controls to minimise or reduce negative environmental impacts relating to compost production.
	d. Coordinate operations to maintain continuous compost processing that meets safety and quality requirements.
	e. Coordinate testing during composting process in accordance with site plan, including temperature, moisture, oxygen and odour.
	f. Monitor and report hazards and risks to management.
	g. Coordinate data collection during composting process.

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
	h. Review data, identify and rectify any issues where required to ensure safety, environmental and compliance requirements are met.

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

Assessment specifications:

Evidence presented for assessment against this skill standard must be consistent with safe working practices and be in accordance with applicable service information, workplace procedures and legislative requirements.

Definitions

Continuous compost processing refers to efficient production of compost through consistent input of raw materials, progression of feedstock through stages of the compost process and consistent output of compost products.

Feedstock refers to organic materials used for composting or related biological treatment systems.

Organic refers to materials that are putrescible or are of animal or vegetable origin.

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

Composting operations

- Composting operations used in the workplace such as windrows, in-vessel, static pile, aerated static pile or GORE® cover system.
- Feedstock evaluation – particle size, mix of wet and dry, carbon to nitrogen ratios, gross contamination.
- Operation set up between production cycles according to manufacturer requirements.
- Coordination of raw materials, machinery and personnel for compost production.
- Monitoring composting operating requirements such as moisture management, temperature, oxygen level, retention time, air filtration, carbon to nitrogen ratios, and amendments.
- Coordination of personnel to undertake composting operations.
- Problem solving and decision making relating to operating issues.
- Data collection and reporting – temperature, oxygen level, carbon to nitrogen ratio, moisture, odour, environmental monitoring (odour, dust, leachate, vermin), customer and/or audit requirements.

Hazard and risk management

- Hazard management such as low oxygen environments, biological diseases, heat, and machinery.
- Environmental controls for dust, odour, leachate, stormwater runoff, emissions, vermin.
- Quality controls including testing for pathogens, contaminants and nutrient content.

Rauemi | Resources

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

- Hazardous Substances and New Organisms Act 1996.
- Health and Safety at Work Act 2015.
- Resource Management Act 1991.
- NZS 4454:2005 Composts, soil conditioners and mulches. Available from: <https://www.standards.govt.nz/>.
- Standards Australia. AS 4454:2012 Composts, soil conditioners and mulches. Available from: <https://store.standards.org.au/>.
- New Zealand Water and Wastes Association. (current edition). *Guidelines for the safe application of biosolids to land*. Available from: <https://www.waternz.org.nz/>.
- UK Environment Agency. (current edition). Technical Guidance Note (Monitoring), M9. *Environmental monitoring of bioaerosols at regulated facilities*. Available from: <https://www.gov.uk/>.
- WasteMINZ. (2009). *Consent Guide for Composting Operations in New Zealand*. Available from: <https://www.wasteminz.org.nz/guidelines>.

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 > Composting
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	27 March 2025	N/A
Kōrero whakakapinga Replacement information	N/A		
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.