

40587 Carry out turning operations for compost production

Kaupae Level	3
Whiwhinga Credit	15
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 carry out turning operations for compost production and monitor windrow conditions to meet quality and safety requirements.</p> <p>This skill standard aligns with the New Zealand Certificate in Resource Recovery (Level 3) with strands in Organic Materials Processing, Recovery and Recycling, and Metal Recycling [Ref: 2744].</p>

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

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Describe turning operations for compost production.	a. Identify different methods of turning compost.
	b. Describe the importance of turning compost and how often turning is required.
2. Carry out turning operations in a compost facility.	a. Assess hazards and risks, and follow risk controls for turning operations.
	b. Assess windrow turning requirements according to conditions and levels of maturity.
	c. Carry out compost turning operations to meet safety and quality requirements.
3. Monitor windrow conditions in a compost facility.	a. Measure windrow parameters.
	b. Record and/or report windrow data.

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.

Definition

Windrow refers to a controlled aerobic composting process in which organic materials are arranged in long rows and regularly turned to maintain optimal conditions for microbial decomposition.

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**Risk assessment and controls**

- Identification of specific risks associated with compost turning operations including anaerobic conditions, dust, leachate, low visibility, odour and water vapour.
- Identification of fire risks and appropriate turning techniques.
- Identification of hazards and risks associated with different machinery used for turning operations such as loader, excavator or compost turning machinery.
- Correct use of Personal Protection Equipment (PPE).

Turning operations

- Completion of turning operations to ensure optimal conditions including moisture, aeration, porosity, carbon to nitrogen ratios, mixing.
- Monitoring of windrow conditions (pre and post turning) – moisture, temperature, odour, size.
- Identification and reporting of windrow conditions during operations including contamination levels and any abnormal conditions.
- Adjustment of moisture levels in windrows.

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/>.
- UK Environment Agency. (current edition). Technical Guidance Note (Monitoring), M9. *Environmental monitoring of bioaerosols at regulated facilities*. Available from:
<https://www.gov.uk/>.

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 Kouna | 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	This skill standard replaced unit standard 23309.		
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.