

## 40584 Recognise health and safety and environmental risks relating to compost production

<b>Kaupae   Level</b>	3
<b>Whiwhinga   Credit</b>	5
<b>Whāinga   Purpose</b>	<p>This skill standard is intended for people who are new to the resource recovery industry or 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 recognise health and safety and environmental risks relating to composting processes and their risk controls.</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

<b>Hua o te ako   Learning outcomes</b>	<b>Paearu aromatawai   Assessment criteria</b>
1. Recognise health and safety risks and risk controls relating to compost production in a resource recovery environment.	a. Identify bioaerosols and their sources in the composting process.
	b. Describe health risks associated with bioaerosols and their risk controls in the composting process.
	c. Describe other biological risks and their risk controls in the composting process.
	d. Identify conditions which increase risk of spontaneous combustion and their risk controls in the composting process.
	e. Describe physical risks and their risk controls relating to compost production.
	f. Describe chemical risks and their risk controls relating to compost production.

Hua o te ako   Learning outcomes	Paearu aromatawai   Assessment criteria
2. Recognise environmental risks relating to compost production in a resource recovery environment.	a. Identify potential contaminants in compost production and their sources.
	b. Describe biosecurity risks and applicable risk controls for compost production.
	c. Explain potential environmental impacts relating to compost production.

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

Assessment specifications:

Evidence presented for assessment against this skill standard may include oral, visual, video, written and/or practical activities demonstrated in the workplace.

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

*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

#### Health and safety risks

- Biological risks including pathogens (viruses, bacteria, protozoa, helminths) and their toxins, microbes, vectors, and allergens.
- Awareness of conditions which increase the risk of spontaneous combustion including temperature, age of pile, frequency of turning pile, surface to area volume ratio of pile, spacing of windrows, oxygen levels and moisture content.
- Physical risks including dust, noise, heat, corrosive, caustic, explosive or sharp materials, weather conditions, machinery and vehicles.
- Chemical risks including contaminants such as heavy metals, pesticides, herbicides, pharmaceutical residues, volatile and semi-volatile organic chemicals and ammonia emissions.
- Risks associated with different feedstocks.

## Risk controls

- Risk control hierarchy.
- Biological risk controls including temperature management, aeration, maturation, coverings or barriers and Personal Protection Equipment (PPE).
- Risk controls for spontaneous combustion including reduction of size of pile, adequate spacing of windrows, regular turning, moisture management, and monitoring temperature.
- Physical risk controls including monitoring and control, site design, mechanisation, and training.
- Chemical risk controls including source control, testing and monitoring, aeration and moisture management, regulatory compliance.
- Environmental controls for dust, odour, leachate, stormwater runoff, and emissions.

## 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.
- Environmental Protection Authority Victoria. (2021). Management and storage of combustible recyclable and waste materials – guideline. Available from: <https://www.epa.vic.gov.au/>.
- UK Environment Agency. (current edition). Technical Guidance Note (Monitoring), M9. *Environmental monitoring of bioaerosols at regulated facilities*. Available from: <https://www.gov.uk/>.
- WasteMINZ. Fact Sheet. BioAerosols in Waste Management. Available from: <https://www.first4safety.co.nz/Bioaerosol-fact-sheet-0417.pdf>.

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

<b>Ngā rōpū whakatau-paerewa  </b> Standard Setting Body	Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council
<b>Whakaritenga Rārangi Paetae Aromatawai  </b> DASS classification	Service Sector > Resource Recovery > Composting
<b>Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga  </b> 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](mailto:qualifications@hangaarorau.nz) to suggest changes to the content of this skill standard.