

DISPOSAL

Guidelines

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1.Purpose

This guideline helps you choose the right method(s) to dispose of contaminated material like dead birds, litter, and waste during a disease outbreak on a production site. These outbreaks will involve notifiable and/or unwanted organisms that are harmful to animals, people, or the environment, as defined under the Biosecurity Act 1993. Examples include Highly Pathogenic Avian Influenza (HPAI), Newcastle Disease (ND), Infectious Bursal Disease (IBD), and Salmonella Enteritidis (SE).

For simplicity, this document will refer to notifiable and/or unwanted diseases collectively as 'diseases'.

By the end of this guide, you'll know how to scale up or adjust operations to fully dispose of all contaminated material on a production site, helping stop the spread of disease and protect the site and neighbouring properties (for farmers/operators, refer to Appendix A for a checklist).

In this document, "you" can refer to either an MPI person or a farmer/operator, depending on who is leading the response activities.

2.Audience

This guidance supports national and regional biosecurity responses to a disease outbreak across New Zealand and its territories. It aligns with internationally recognised risk assessment and disposal methods, making it applicable both within an MPI-led response under the Biosecurity Act, as well as situations where MPI is not directly involved in managing a disease outbreak.

It is intended for:

- Poultry industries (breeding, rearing, broiler and layer flocks), including farmers and livestock managers,
- Industry bodies (Poultry Industry Association of New Zealand and the Egg Producers Federation),
- Poultry site operators, owners and managers, including those not associated with the industry bodies,
- Contractors, including transporters,
- Operational teams conducting depopulation, disposal, decontamination or audit functions,
- MPI Place Managers supporting affected individuals and locations in the circumstances where a response is directed by MPI under the Biosecurity Act.

Use this space if you would like to make notes as you go through this document.

3. Considerations

Disposal during a disease outbreak isn't business-as-usual. You'll need to know the options, have council consents ahead of time, make tough decisions, and change how things are normally done on the site. Consider all possible contaminated materials that will need to be disposed of:

- **Biological** e.g. carcasses, and egg waste,
- **Bio-degradable** e.g. bedding, manure, and some personal protective equipment (PPE),
- **Non-biodegradable** e.g. gear, plastics, general waste, sharps, and uncleanable materials such as egg belts.
- **Wastewater** e.g. wash water, sludge and effluent.

If it is a free-range site, include options for paddock materials such as grass or stones, that can't be cleaned or disinfected. Biosecure transport is an integral part of the disposal planning.

Ask yourself: *What needs to be disposed of? What risks need to be managed? How will items be disposed of? Is a resource consent needed? Is support from specialists needed? How will liquids be treated and disposed of? Is biosecure transport needed?*

Start with what is already done for disposal at the site. Then use the principles below to guide your thinking on what extra needs to be done in a response situation which should be documented within the on-site Response Plan. These aren't just technical requirements, they're the foundation for making smart, safe, and effective decisions under pressure.

3.1 Risk-Based

Ask yourself: *Am I making decisions based on risk assessment?*

Every step should reduce the chance of disease spread or persistence. Think about how people, gear, and vehicles move around the site, and lock down risky areas that could carry infection. Think about movement on and off the production site, how you'll contain the disease, and what biosecurity controls you'll need to put in place. Use the risk assessment framework (see Appendix B) to guide your planning. Make sure the disposal plan lines up with the depopulation plan as they need to work together smoothly. Discuss risks and how they'll be managed with all third-party contractors, including transport companies and off-site disposal providers like landfills. In an outbreak, it may be more than one site needing the services of local contractors, so be prepared for the wider impacts in the region.

3.2 Safe

Ask yourself: *Is everyone involved protected, including people, animals, and the environment?*

Disposal is ongoing during a response with a range of contaminated materials that need to be disposed of. It takes time and is relentless. Make sure the team is skilled with the appropriate training, qualification or experience, gear is safe, and work areas are well-ventilated and monitored, with vehicle and people's movements being separated and controlled. Remember, if a response is directed by MPI under the Biosecurity Act, MPI becomes the lead Person Conducting a Business or Undertaking (PCBU), so MPI and operators will need to work together to ensure safety systems align. If you've got contractors on-site, keep communication

clear to avoid mistakes and keep things running smoothly or ensure issues are rectified rapidly if they should occur.

3.3 Effective

Ask yourself: *Will this method get the disease off the site?*

You'll need to use methods that are proven to work. This isn't the time to experiment. Think about whether the current setup can deliver the outcome needed, or if there is a need to bring in additional equipment, people, or processes to get the job done properly. Know where the dirty and clean zones are and how you are going to control movement to ensure one-way flows and transition people, equipment and vehicles across the boundary between the two - the 'red line'! Plan to ensure depopulation, disposal and decontamination (3Ds) progress effectively and manage the risk of bottlenecks.

3.4 Timely

Ask yourself: *Can this be done fast enough to stay ahead of the disease?*

Work quickly, but safely. Biosecure transport preparation and decontamination for disposal off-site can take time and create a bottleneck, so plan accordingly.

4. Activity Overview: Planning, Process Choices, Safety and Timelines

Disposal during a disease outbreak is a high-risk, high-pressure operation that must be safe, timely and thorough. The plan needs to cover how disposal will be done, who's involved, what equipment is needed, and when it must happen.

If MPI manage the on-site response under the Biosecurity Act and take control, the farmer/operator will receive:

- Movement restrictions to contain the disease.
- A Notice of Direction (NOD) that outlines how and by when disposal must occur.

If the farm has a comprehensive response plan, that covers all required elements, MPI can review and accept it. This gives clarity, confidence, and a clear path forward. Once an MPI response is directed under the Biosecurity Act, MPI is in charge. The farmer/operator's role is to be ready to act within MPI's framework, not outside it.

If MPI does not initiate a response under the Biosecurity Act, sections 52 and 53 of the Biosecurity Act, still require the farmer/operator to prevent disease spread. A comprehensive disposal programme also supports the elimination of the disease from the property, to ensure a safe return to production after a disease outbreak.

How farmers/operators can be operationally ready:

- Develop a Standard Operating Procedure (SOP) that outlines the chosen disposal method(s). SOPs must meet legal and guideline requirements and will be used for audit purposes.

- Ensure sufficient skilled personnel with the appropriate training, qualification or experience are available.
- Obtain required resource consents ahead of time.
- Know how monitoring of health and safety will be carried out throughout operations.

Key questions to consider:

- Can current procedures be scaled up for disposal of all contaminated materials in a disease outbreak? (Think about the volumes and weight of material that will need to be disposed of.)
- Are the right personnel available?
- What equipment is already available, and is it transportable and fit for purpose? What else is needed?
- Is the disposal site safe and compliant? How will monitoring occur?
- Have the logistics, such as a trucking company and approval from the landfill, been organised?

For farmers/operators: if you can't identify a way forward after going through this guideline talk to your vet, the livestock manager, or your industry representative for help.

4.1 Planning

Tailor the plan to each part of the site. Expect a significantly tougher job than usual. Extra gear and skilled people with the appropriate training, qualification or experience are likely to be needed.

As you plan your approach, remember, all disposal activities must be carried out with the express intent to prevent the spread of disease, within the site, beyond the site, and to personnel involved. Treat the boundary between the infected or suspect premises and the outside world as a biosecurity "red line". No contamination should cross this line. Red lines can be physical barriers such as fences or water ways. Where there is no physical barrier, such as at a legal boundary, creation of a physical marker, such as standards with horse tape and a sign will be needed.

When planning the disposal methods, the following needs to be ensured, so as not to cause disease spread:

- Keep contaminated materials and equipment separate from clean items.
- Clean and disinfect equipment daily and before reuse.
- Bag or cover contaminated materials before moving.
- Prevent contamination beyond the infected site.

4.1.1 Site Assessment and Feasibility (Environmental Requirements)

Make sure you account for everything e.g. the entire site gone at once including birds, litter, uncleanable materials etc. Choose a site with enough space, stable soil, and suitable conditions for burial, or composting. Use site visits and maps to support decision-making.

For burial:

Engage a geotechnical engineer to:

- Confirm the soil can support heavy machinery.
- Ensure groundwater separation: at least 2m for unlined burial or 1m for lined burial.
- Collect baseline groundwater samples for environmental monitoring.

For composting:

- Consult environmental specialists and regional councils to confirm compliance with composting regulations.
- Select a site with well-drained, stable soil and adequate space for windrow or static pile composting.
- Ensure a minimum 1m separation from the seasonal high-water table to prevent groundwater contamination.
- Secure access to carbon materials (e.g., wood chips, straw) to absorb moisture and support decomposition.
- Implement odour and pest control measures and design for stormwater diversion. Failing to protect contaminated materials from water run-off, birds or rodents can result in the spread of the disease.

For farmers/operators: if you are not used to composting, it is not easy and you should consider trialing methods in advance of a disease outbreak, and you will need specialist advice.

For off-site disposal:

- Discuss these requirements with the off-site operator during the planning phase:
- Hold the necessary resource consents.
- Have standard operating procedures (SOPs) for handling contaminated materials.
- Maintain personnel training records.
- Are registered under a Risk Management Programme (RMP) for avian species (if required).

4.1.2 Regulatory Approvals (Consent Requirements)

Resource consent is usually required for on-site disposal options, with requirements varying between region (refer to the Regional Disposal Guide for your area). You need to:

- Apply early for resource consent.
- Consult early with regional councils, territorial authorities, and other relevant agencies.

For farmers/operators: don't leave this to the last minute. If you have not gained resource consent for on-site disposal from your council ahead of a disease outbreak, you are going to limit your available options.

4.1.3 Expect Extra People on Site

During a response, there will likely be more people on the production site than usual. This could include contractors, MPI staff or specialist service providers.

To keep things running smoothly and safely farmers/operators will need to:

- Give site inductions to everyone who arrives.
- Continue to keep a visitor log and control who enters the site.
- Make sure everyone understands the risks and safety rules.
- Ensure they (or a designated person) are available to carry out inductions at the start of each day and safety compliance checks as they work through and around the site.

For farmers/operators: expect the media. Keep them off site, don't engage and instead direct them to the industry representative or MPI media team.

4.1.4 Disposal Team Requirements

Disposal operations require personnel (new personnel require oversight and on the job training) who:

- Are skilled with the appropriate training, qualification or experience in the disposal methods being used.

Team composition should be adjusted based on production site type and housing to meet health and safety standards. Essential roles include:

- Supervisor or Site Manager: Oversees operations and ensures compliance.
- Disposal Personnel: Numbers vary by method and amount of contaminated material.

4.1.5 Before Work Starts

Make sure every person on site:

- Wears Personal Protective Equipment (PPE) appropriate to their role.
- Attends a site-specific health and safety briefing.
- Keeps access clear for vehicles and people.
- Follows all risk controls and reports any new hazards.

All activities must follow the Health and Safety at Work Act 2015 (HSWA). That includes movement controls and any operational work.

4.1.6 Materials

Always keep the following materials on-site (scale up as needed):

- Personal Protective Equipment (PPE): Refer to section 4.3.2.
- Safety Equipment: First aid kit, adequate lighting, firefighting equipment (if burning) and personal gas monitors (if using gases).
- Disposal Equipment: Confirm method-specific tools (e.g. liner system, fuel) are functional and meet minimum standards.
- Machinery: For moving contaminated materials to disposal vessels e.g. front loaders, or telehandlers. If you are hiring machinery, make sure you are familiar with the equipment you are asking for and there is someone skilled with the appropriate training, qualification or experience to operate it. Contract growers can check if their livestock manager is able to supply.
- Documentation Tools: Pens, clipboards etc.

4.1.7 Transport Requirements and Logistics

Diseases such as HPAI are classified as an infectious substance affecting humans. Vehicles transporting such contaminated material must comply with the Land Transport (Dangerous Goods) Rule 2005, including displaying Hazardous Goods signage.

Off-site disposal of contaminated materials will require biosecure transport. Coordinate with contractors to manage access, equipment, safety, and contingency plans.

Figure 1: Example of the required signage



An enlarged version of a label representing a class or division of dangerous goods



A black and orange horizontally striped label displaying either the word dangerous or hazardous

4.1.8 Cultural Responsibilities

Engage early with iwi, hapū, and whānau when identifying burial sites, regardless of land ownership. Review Treaty settlement documents and cultural assessments to meet Te Tiriti o Waitangi obligations and protect culturally significant areas. Councils will be able to help determine any culturally sensitive areas.

4.2 Disposal Methods: Overview and Safety

You are likely to utilise a combination of on-site and off-site disposal methods (refer to table 1), with biosecure transport being an integral part of disposal planning.

Choosing the right disposal methods depends on the type of contaminated material being disposed of, site conditions, local off-site disposal options, and legal requirements including regional requirements and council consents. All methods must be effective, and safe for people, animals and the environment. Use this section (refer to table 2) to understand the options.

Table 1: On-Site vs Off-Site Disposal

Option	Pros	Cons
On-site	No transport required; lower cost; reduced risk of spread.	Consent required; environmental risks; may delay restocking.
Off-site	Faster site clearance; scalable via waste facilities. Consent requirements met by third-party. Permit to move is likely to be required.	Requires suitable regional site; biosecure transport; what is good for normal disposal may not be suitable for diseased birds or other materials.

Table 2: Disposal Options

Method	Material	Information & Requirements
Unlined burial	Carcasses, litter, waste	Suitable where soil and geology reduce leachate risk. Requires 2m groundwater separation. Use dedicated vehicles or clean and disinfect thoroughly before reuse. Construct trenches $\leq 3\text{m}$ wide, with 2m cover above carcasses. Clean and disinfect burial area daily. Avoid gravel or limestone soils. Maintain buffer distances: 100m from water bores, 50m from boundaries, 300m from marae/reserves.
Lined burial	Carcasses, litter, waste	Required where groundwater contamination is possible. Source Geosynthetic Clay Liners (GCLs) early due to limited supply. Follow all unlined burial protocols, noting this method requires 1m groundwater separation.
Mounding (above-ground)	Carcasses, litter, waste	On-site option. Requires Work Health and Safety planning, environmental controls, and regulatory approval. Must prevent runoff and odour.
Composting (on-site)	Carcasses, litter	Must reach 55°C for 3 days, 48°C for 10 days, or 37°C for 30 days. Stage 1 indoors preferred. Prevent aerosol release and pest attraction. Maintain C:N ¹ ratio of 25:1–40:1. Use 2–5 cm carbon materials (e.g. straw, shavings, mulch). Avoid >5 cm. Monitor temperature daily. Site must have: temperature probes, flags, plastic covers, rubbish bags, cable ties, containers, data sheets to record temperatures, pest control, fire extinguisher, first aid kit. On-site composting can be the most effective means of preventing disease spread.
Composting (off-site)	Litter (only)	Commercial operators may accept litter only. Requires biosecure transport and resource consent. Centralised composting must prevent spread via insects or animals.
Waste Water	Cleaning stations, shed cleaning	The liquid portion undergoes disinfection and pH adjustment, and the resulting sludge portion is disposed of in accordance with biosecurity and regulatory requirements.

For further details about each method, refer to the appropriate Work Instruction, with a more detailed description of composting options found in Appendix C at the end of this document.

¹ C:N means Carbon to Nitrogen ratio.

Methods not permitted or not recommended in New Zealand

The following methods are not recommended for use in New Zealand:

- Rendering: Unlikely to be accepted due to export restrictions.
- Incineration on pyres: Not recommended due to public resistance, poor burn quality, high fuel cost and odour issues.
- Digestion: No current facilities that will accept infected products.

Transporting contaminated materials safely is critical. Choose a transport method (refer to table 3) based on risk level and containment needs. This is not just for vehicles travelling off-site. On-site vehicles moving contaminated materials can still spread disease. For example, tipping birds into a skip can release feathers into the air. Consider how risks can be reduced, such as using sprays to dampen light material to reduce airborne risk.

Table 3: Biosecure Transport Options

Method	Information
Bathtub tippers (dump truck)	Open-box bed with hydraulic lift. Require covering e.g. tarp.
Sealed bulk bin liners	Fully sealed and leak-proof with rubber seal.
Modified bulk bin liners	Adapted to meet biosecure requirements.
Open-top containers	May be difficult to unload; assess risk. Require covering e.g. tarp.
Lidded skips	Sealed at base and sides; requires lidding.
Container trucks	Sealed leak-proof containers; vents covered.
Ute with canopy	Used on farm for equipment and chemicals.
Utility van	Used for small items and diagnostic samples.
Other	Other transport modes may be used following a risk assessment.

In all cases the vehicle must travel directly to the destination via a pre-approved route without deviation unless agreed. Fully decontaminate vehicles each time they cross a red line and never leave vehicles with contaminated material in unsecured areas. After offloading at the disposal site, vehicles run through a cleaning and disinfection station, focusing on tyres, rims, and the undercarriage. Contain all washwater and manage liquids to avoid spills or splashing. Double bag used PPE before loading, and clean and disinfect all equipment before it goes onto the vehicle. If a risk assessment allows, returning vehicles may not need internal tub cleaning. At the end of each day, clean and disinfect all machinery, including loaders.

Regardless of the type of transportation, there are specific biosecurity requirements that must be met (refer to table 4).

Table 4: Transport Biosecurity Requirements (Applies to All Transport Independent of Methods)

Requirement	Details
Vehicle watertightness	Vehicles must be watertight or adapted to be watertight.
Approved configurations	Sealed bulk bin liners, lidded hook bins, modified bulk bin liners, container trucks with sealed, leak-proof containers.
Leak-proof testing	Vehicles must pass dye and incline leak-proof testing. Results recorded in logbook and carried at all times.
Red Line Protocol	Maintain strict separation between infected and clean zones. Vehicles must be cleaned and disinfected before crossing and again upon exit.
Containment	Use sealed containers, liners, or covers to prevent leakage or aerosol spread. Double-bag used PPE before loading.
Wash water disposal	Contain, treat and dispose of wash water from cleaning stations appropriately.

Set pest control baits or traps wherever contaminated material is stockpiled for transport.

4.3 Personnel: Overview and Safety

This section helps you prepare the team and site for disease response operations. It covers who needs to be involved, how to keep everyone safe, and how to support people through demanding tasks. Following these steps will help meet legal requirements and protect everyone working on the production site.

Everyone on site must put health, safety, and wellbeing first. Before any work starts, make sure there is a Health and Safety Plan in place. This plan should include:

- Clear instructions on Personal Protective Equipment (PPE).
- A site-specific risk register.
- Risk assessments for each activity, with steps to reduce those risks.
- A system for monitoring and reporting new hazards.

Disposal during a disease outbreak comes with additional risk from exposure to disease through skin or inhalation. Mitigate these risks by using the correct PPE, working in well-ventilated areas, and monitor health. For workplace-specific advice, check the [Te Whatu Ora website](#).

For MPI staff-specific information, please refer to Appendix D.

4.3.1 Activity-Specific Risks

Each disposal method comes with its own risks. The plan must include safety measures to protect personnel and ensure compliance with health and safety laws.

Table 5: Activity-Specific Safety Requirements

Activity Type	Key Risks	Safety Measures
Packaging risk materials	Exposure to virus	Wear correct PPE at all times.
Loading/unloading materials	Exposure to virus	Develop a clear plan and follow it. Always wear correct PPE.
Driving	Fatigue from long hours under pressure	Use rosters and follow legal break requirements.
Cleaning/disinfecting vehicles	Working at height	Use a ladder or scissor lift to access high areas safely.
Communicating safety issues	Lack of awareness	Ensure all staff attend site inductions and briefings. Use safety boards.
Emergency management planning	Unclear response to wider H&S issues	Develop and maintain clear emergency plans that can be quickly implemented.
Working with contractors	Contractors unaware of H&S requirements	Review all contractor/sub-contractor H&S plans and job safety analyses.
Staff wellbeing	Mental health pressure	Schedule regular well-being check-ins and provide access to support services.

4.3.2 PPE Requirements

Each person must have their own PPE set, to protect them, and to prevent disease spread, sufficient for the full duration of site work. Minimum PPE includes:

- Coveralls (Disposable or non-disposable laundered on-site)
- N95/P2 face masks (there are options for full face masks)
- Disposable latex gloves
- Gumboots (cleaned and disinfected)
- Antiseptic wipes
- Full disposable coveralls
- Eye protection
- Long-sleeve non-disposable gloves
- Hearing protection
- Approved disinfectant and spray bottle

Cover all clothing and equipment where possible. Change non-disposable PPE according to decontamination protocols between areas and before leaving the site.

4.3.3 Wellbeing

Disposal tasks are physically and emotionally demanding. It is essential to:

- Monitor personnel wellbeing throughout operations.
- Provide access to support services.
- Encourage regular breaks and team check-ins.

Refer to [Managing psychosocial risks at work | WorkSafe](#) for further guidance.

4.3 Timelines

Disposal should follow a phased timeline:

- **Category 1 material** (e.g. carcasses) should be disposed of within the first 2–3 days post-detection.
- **Category 2 material** (e.g. packaging, cardboard) follows after initial carcass disposal.

There is no fixed timeline for disposing of contaminated materials. The timeframes provided in this document are guidelines only. As a general rule, dispose of all contaminated materials as quickly and safely as possible, prioritising high-risk items. Actual timelines will be adjusted based on the specific situation and Response Plan.

Table 6: Disposal Timelines

Items level of risk	24 hours	48 hours	7 days	10-14 days
Category 1 (Very high risk and high risk)	Planning for the whole infected place for: Disposal of carcasses and litter in infected shed(s). Disposal of general waste in infected shed(s).	In Progress: depopulation across all sheds, with disposal also initiated but not likely to be running 100%.	Large flocks: Disposal likely still ongoing. Medium to small flocks: Disposal concluding,	Completed: disposal of high-risk material
Category 2 (Medium, low, and very low risk)	N/A	In Progress disposal	Completed Disposal	N/A

5. Assurance

Making sure the disposal process, including biosecure transport, is done right keeps the production site, team, and industry safe. It also demonstrates the law, biosecurity and health and safety standards have been met. During a response to a disease outbreak not managed by MPI, there is still an expectation that MPI or an Approved Person may visit the site to check everything's been done properly.

5.1 What Farmers/Operators Should Have Ready

- Site approval from a geotechnical engineer (as appropriate).
- Resource consent (if required).
- Movement control permits (where required).
- Health and Safety Plans for the disposal site.
- Site map and disposal SOP which is the go-to guide for how things should be done.

5.2 What Farmers/Operators Should Record

- Quantity of material disposed.
- Personnel training, qualifications or experience and supervision details.
- Burial details and inspections.
- Truck and personnel arrival and departures as well as truck cleaning logs.
- End-of-day cleaning of all gear and equipment. Any issues and what was done to fix them.

5.3 What Audit Reality Checks are Likely

To keep the production site and the industry safe, checks will:

- Confirm disposal methods are used correctly and safely.
- Ensure transport follows strict biosecurity protocols.
- Check that records and documentation are complete and accessible.
- Carry out on-site checks to verify containment, cleanliness, and compliance.

MPI or an Approved Person may audit operations and record findings using a standard checklist which is available in the Work Instructions.

6. Appendices

Appendix A: Disposal Readiness Checklist (Farmers/operators-specific information)

Goal: Be fully prepared to dispose of all contaminated products on-site quickly and safely during a disease outbreak.

✓ Task	Check
Documentation	
I've written a clear disposal SOP (including biosecure transport needs) that explains how we'll carry out the process. It meets legal requirements.	
I've obtained all the necessary resource consents for disposal to occur on-site.	
I've got a site map showing where on-site disposal will happen and how people, equipment and vehicles will move.	
I've aligned my disposal plan with my depopulation plan.	
I've got a health & safety plan in place, including how we'll monitor personnel safety during the operation.	
I've got a communication plan including who to call, when, and how (MPI, contractors, personnel, etc.).	
Records	
I've got a plan for record-keeping during the operation (e.g. tonnage of materials, truck logs, temperature checks, cleaning logs).	
Operations	
I've consulted with the necessary specialists to develop a robust plan.	
I've arranged for contractors or extra help , and they know our SOP and safety rules.	
I've confirmed transport and disposal trucks are available and understand our biosecurity rules.	
I've made sure we have enough skilled personnel , and I've kept records of their training, qualifications or experience.	
I've walked through the plan with my team and made sure everyone knows their role.	
I've briefed all personnel on what to expect and how we'll keep everyone safe and compliant.	
I've checked that we have safe, well-ventilated areas to carry out disposal.	
I've checked that cleaning and disinfection supplies and equipment are ready and working.	
I've got enough PPE and safety gear for all personnel and visitors.	

Appendix B: Risk Matrix for Infectious Disease Organisms (Pathogens)

The ratings below are the relative likelihood of an infectious disease organism being present on or in the materials or objects. If not on the table, the risk is negligible, and any further risk is adequately managed as per existing regulatory systems.

Risk ratings can be assessed individually, or in groups/areas. It may be most effective to, at a large place, understand what the highest risk item(s) or areas are, and apply that standard across a whole group of items or the whole place.

Table 7: Risk Ratings for Pathogen Presence/Relative Amount on Infected Places (IPs) And Suspect Places (SPs)

Very High (5)	High (4)	Medium (3)	Low (2)	Very Low (1)
-Live birds -Carcasses -Raw meat and meat raw by-products -Contaminated eggs and raw egg products and by-products -Other non/minimally processed (likely contaminated) by-products (hatchery waste, feathers, inedible offal) -Contaminated water and feed in contact with live birds and carcasses -Uncontained waste products and effluent (manure, litter, and wash water) -Free range areas in contact with live birds and carcasses (paddocks, orchards, etc)	-Slaughter and/or Processing equipment for eggs and meat -Surfaces within indoor spaces that have contact with live birds and carcasses -Animal husbandry equipment within indoor spaces that have contact with live birds and carcasses (e.g., feeders, waterers, roosts, nest boxes) -Unused daily water, litter and feed supplies -Used PPE (contaminated and direct contact with Very High and High category things) -Contained waste products and effluent (manure, litter, and wash water) -All disease management equipment -Animal health/veterinary equipment	-Vehicles used on-site or needing to move off-site with contact with anything in the Very High or High categories -Packaging and transport materials on site in contact with anything in the Very High or High categories -Products that have only had initial processing (e.g., cleaned/washed eggs, any HACCP² applied during processing) -Any stored feed or crops collected from paddocks on or around an IP/SP and/or in areas with active outbreaks -Other clothing and people in general (as conveyors) -Any waste that may have had indirect contact with anything in the Very High or High categories	-Vehicles visiting the premises from off-site or used on-site with no contact with live birds, carcasses, or any contaminated material (e.g., transport of processed products) -Other equipment on-site and not in direct contact with anything in the Very High or High categories but may have indirect contact via people or contaminated environments/areas -Products that have been further processed or rendered to a higher standard (e.g., eggs that have been washed to a food safety standard) -Edible product and by-product-associated packaging and transport -Feed and water brought onto a place and stored in a biosecure manner -Non-susceptible animals (to the circulating strain) including pests and predators	-Diagnostic samples (appropriately packaged) -General materials and goods brought onto a place and kept stored/packaged in an isolated/quarantined and biosecure manner. -General equipment not used with processing or animal husbandry -General waste not used with processing, animal husbandry, or disease management activities. -Cooked product (meat and eggs)

² HACCP = Hazard Analysis and Critical Control Points, is a systematic preventive approach to food (and feed) safety.

Appendix C: Composting Options

Table 8: Composting Pros and Cons

Option	Pros	Cons
On-site – Phase 1 inside, Phase 2 inside	Best temperature control; ideal for virus inactivation	Occupies poultry shed for extended period; challenging for layer setups
On-site – Phase 1 inside, Phase 2 outside	Good control in Phase 1; frees shed earlier	Phase 2 vulnerable to rain; requires pest control
On-site – Phase 1 outside, Phase 2 outside	Frees shed early; doesn't require indoor space	Harder to maintain temperature; vulnerable to rain; pest control needed
Off-site – Phase 1 inside, Phase 2 inside	Commercial composting possible; easier temperature control	Requires large space; biosecure transport; consent needed
Off-site – Phase 1 inside, Phase 2 outside	Frees up shed space; scalable	Vulnerable to rain; pest control needed; biosecure transport required
Off-site – Phase 1 outside, Phase 2 outside	Doesn't require shed; scalable	Vulnerable to rain; pest control needed; biosecure transport required

Phase 1 – High biological activity and temperature.

Phase 2 – After turning of compost once the temperature profile for phase 1 has been met. This is where the compost stabilizes.

Table 9: Composting Timeline Overview

Day	Activity
0	Plan composting activities; arrange contractors and machinery
1	Prepare composting site; construct windrows; record baseline temperature
2–3	Temperature monitoring: windrow should reach >38°C within 72 hours
4–6	Temperature monitoring: maintain >55°C for 3 consecutive days
7–14	Temperature monitoring: maintain >38°C for 14 consecutive days
15	Turn windrows; continue temperature monitoring
16+	Begin secondary composting phase (indoors or outdoors)

Appendix D: Health and Safety for Disposal (MPI-specific information)

General Information

There must be a verifiable Health and Safety Plan in place, which includes clear guidance on the use of personal protective equipment (PPE). All personnel must follow the health and safety protocols relevant to their role and ensure they are familiar with both the Risk Register and the Health and Safety Plan specific to their duties and location. Emergency procedures must be followed, roles and responsibilities clearly identified, and appropriate training provided to all involved.

Refer: [Avian influenza health and safety guidance for workplaces – Health New Zealand | Te Whatu Ora MPI Response Readiness HPAI H&S Guidance for Op Work Activities.docx](#)
[Health and Safety Standard.](#)

Table 10: Health and Safety Process

Step	Action
1	Personnel to don required PPE for specific role.
2	Carry out health and safety briefing as per the site-specific health and safety plan.
3	Establish access-ways and always maintain safe and clear vehicle access.
4	Implement all agreed mitigation/s against identified risks as per the health and safety plan. Report and record any risks that arise during operations.

Specific Requirements

PPE is donned for two reasons: for personal protection against the HPAI virus and to enable the removal of potentially contaminated clothing (PPE) prior to exiting the poultry farm, or in the case of areas of varying risk, prior to crossing the biosecurity “red line”.

During the process of physically removing both organic and inorganic material from Poultry sheds, the safe air breathing levels must be tested for high levels of ammonia prior to entry (Recommended safe levels of ammonia in poultry sheds are recommended below 25 ppm, ideally under 10 ppm). The safe breathing air levels of Carbon dioxide (CO₂) must also be tested (Recommended safe levels of CO₂ in poultry sheds are recommended below Time Weighted Average (8 hours) 5000 ppm or STEL (Short term 15 minutes) 30000ppm).

If higher, there must be a minimum ventilation rate of 5 to 10 air changes per hour of ventilation.

Burial (including Engineered Landfill)

- There are health and safety responsibilities where on-site burial involves the excavation of a trench in which carcasses and other materials are placed. Excavation work must comply with the Health and Safety in Employment Regulations 1995 Section. 24 and 25 Duties in relation to excavation work with a burial site face more than 1.5 metres high of a hazardous depth.
- Excavation work must be undertaken by a competent person with the ing, qualification or experience and skills to safely undertake trench excavation work.
- Prior to any excavation work a Breaking Ground Plan must identify any; underground amenities

(electrical, Gas or water) ground stability test undertaken for safe access and protection against edge collapse, barriers and exclusion zones in place around the edges of the excavated area and a watcher present to monitor the safety of vehicle work activities.

Composting

Composting heavy machinery work must be undertaken by a competent person with the training, qualification or experience and skills to safely undertake the work activity.

Incineration

The Health and Safety Plan should include considerations of risk from fire and hot surfaces and the use of trucks and other machinery.

Welfare

The welfare of responders and impacted persons is an important consideration in all operational activities. For MPI/BNZ personnel refer to the SOP for *Welfare & Support in an HPAI response* for full details of the welfare function and responsibilities.