



DISPOSAL

BIOSECURE TRANSPORT WORK INSTRUCTION & CHECKLIST



Ministry for Primary Industries
Manatū Ahu Matua



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Disclaimer

This publication is for the purpose of supporting the New Zealand poultry industry in responding to disease outbreaks, including Highly Pathogenic Avian Influenza (HPAI), Newcastle Disease (ND), Infectious Bursal Disease (IBD), and Salmonella Enteritidis (SE). While every effort has been made to ensure the accuracy of the information presented, the Poultry Industry Association of New Zealand (PIANZ) and the Egg Producers Federation (EPF), and MPI accept no responsibility or liability for errors, omission, or opinion contained herein, nor for any consequences arising from decisions made based on this information.

1. Purpose

This work instruction and checklist outline the processes for safely moving contaminated material, such as carcasses, eggs, or litter infected or suspected of having a notifiable disease such as Highly Pathogenic Avian Influenza (HPAI), from an infected site to an approved disposal location (e.g. burial, composting, or landfill).

Why this matters:

Removal of infected material must be done safely and securely to prevent the spread of disease. Under the Biosecurity Act 1993, no one can knowingly spread disease, so this is a legal obligation.

Biosecure transport defined:

The controlled movement of infectious material using sealed containers, disinfected vehicles, and approved routes, ensuring no disease escapes during transit.

🔗 Please read this document in conjunction with the **Standard, Disposal Guideline** and the **Disease Response Biosecurity Plan Guidebook** to ensure all procedures are followed correctly. Where a site already has a Standard Operating Procedure (SOP) for biosecure transport which meets the requirements in the Standard, use the SOP.

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

2. Actions

Before you start

To plan biosecure transport properly, first figure out:

- **What** needs disposing (e.g. carcasses, eggs, litter);
- **How** much material there is;
- **When** it needs to be moved.
- **What** permits are required to move material offsite

🔗 For farmers / operators, you can use **Section B2** of the Disease Response Biosecurity Plan Guidebook and Template, or the online Disease Response Biosecurity Plan Builder to help record this information.

Understanding the challenge helps you:

- Pick the right gear (bins, liners, vehicles);
- Line up the right people;
- Build a clear health and safety plan and procedures for biosecure transport.

🔗 **See Appendix A** for the key information about the biosecure transport plan.

🔗 **See Appendix B** for biosecure transport examples, to help your detailed approach.

🔗 **See Appendix C** for step-by-step instructions on how to carry out biosecure transport.

Remember the red line

The *farm production area map* (Section A.2.1 of the Disease Response Biosecurity Plan Template) shows the infected site and there should be a similar map for the disposal site (if off-site). Treat these sites like they have a border - the **red line**.

Inside the red line = contaminated.

Your job = **keep infection from crossing the red line**.

- ☒ Contain and package risk goods securely.
- ☒ Clean and disinfect any vehicle, gear, or container before it crosses the red line to enter or exit the site.
- ☒ Don't let infection hitch a ride off-site.

Work with contractors and disposal site managers to make sure everyone's on the same page.

2.1 Materials & personnel

These are the core elements that support good practice. You may need to scale up depending on the size of the job

Category	Item
 Personal Protective Equipment (PPE)	• Personal Protective Equipment as outlined in the Health New Zealand guidance • Antiseptic wipes. • Disinfectant and spray bottle. • First aid kit. • Paper towels.
 Safety equipment	A spillage kit to contain leaking fluids, temporary sealing leaks (e.g., caulking compounds), and an approved disinfectant should be carried, and drivers trained in how to use it. Drivers who have to deal with leaks must notify the transportation manager and infected site manager (e.g. RMP operator) as soon as possible. They and the truck cab will be considered contaminated and full decontamination processes will be required.
 Transport & containment gear	• Polythene liners. • Absorbent material (e.g. sawdust). • "Hazardous goods" signage for trucks. • Large plastic rubbish bags. • Cable ties. • Large plastic containers. • Data and information sheets, pens, clipboards.

Category	Item
 Machinery & vehicles	Excavation equipment i.e. front loaders, telehandlers, or similar machinery, 20 to 25 tonne capacity diggers are recommended Appropriate vehicle, the most suitable configurations of vehicles are: • Bathtub tippers; • Sealed bulk bin liners; • Modified bulk bin liners; • Lidded open-top containers on skeletal carriers. Keeping contaminated material covered is key (as an example, using a tarp over a front-end loader can stop material flying away in the wind). Think about what you already have and what you may need to hire.

2.2 Health and safety actions

The on-site, **written health and safety plan** for any vehicle arriving or leaving the infected site needs to cover risks associated with biosecure transport during a disease incursion. If you're working with **contractors** or using an **off-site disposal location**, make sure you're familiar with and coordinate with their Health & Safety plans too.

This ensures everyone is working safely, understands the risks and follows the right procedures to prevent disease spread.

This plan should cover:

- **Entry and exit points** (watch for contamination), include disinfection steps for vehicles, equipment and personnel before departure and after arrival;
- **Risk management for handling infected carcasses or waste;**
- **Movement controls** for vehicle movement through high-risk zones (e.g. near sheds, water sources, or red line boundaries);
- **PPE requirements** for drivers and loaders.
- **Spill or leak risks** during loading/unloading.

Work with:

- The **truck company** (if transporting to off-site disposal site);
- The **final disposal site** (e.g. commercial landfill or composting operator). Have a clear plan in place if the site is not commercial;
- Any **contractors** involved in composting activities.

Make sure everyone understands each other's health and safety plans and that they're aligned.

You need a plan for:

Stage	What to Cover
On the infected site	Arrival, loading, exiting
During transit	Secure containment, route, spill response
At the disposal site	Arrival, off-loading, exiting

Follow these rules:

- ☒ Conduct a health and safety briefing based on the site-specific plan.
- ☒ Keep accessways clear and safe for vehicles and machinery.
- ☒ Ensure adequate lighting e.g. in sheds or when working at night.
- ☒ Wear correct PPE at all times.
- ☒ Stick to all biosecurity procedures, including recording and reporting any new risks.
- ☒ Handle materials carefully to prevent spread during loading, transport, and unloading.
- ☒ Watch for leaks or spills and follow agreed actions if they occur.

 Refer to: [Avian influenza health and safety guidance for workplaces – Health New Zealand | Te Whatu Ora](#)

2.3 Biosecure transport procedures

Where there is one, use the site's SOP for biosecure transport and/or be familiar with the SOP for the contractor. Before starting, check the SOP against the Disposal Guideline and Standard, to ensure it supports good practice and meets requirements. If it doesn't, update it or arrange an alternative method. If no SOP exists, create one using the Disposal Guidelines and Standard.

Auditors will use the **Biosecure Transport Audit Checklist** to confirm all required steps are completed.

 **See Appendix D** for the audit checklist that helps to assess if all the required steps have been covered.

For farmers/operators:

-  **See Appendix C and E** for help with writing your biosecure transport SOP.
-  **See Appendix F** for case studies that show what to expect in real-world scenarios.

3. Appendices

Appendix A: Key information

Purpose

To prevent the spread of infectious agents during the transport of contaminated material from infected sites to disposal locations.

Before transport:

- Plan ahead: confirm disposal method, route, and timing.
- Contact disposal site: ideally at least 2 days in advance.
- Establish red line: define clean/dirty zones at both origin and destination.
- Vehicle preparation:
 - Clean and disinfect before entry.
 - Install liner (if needed) and seal leak points.
 - Load material with minimal spread.
 - Spray with approved disinfectant.
 - Secure with impervious cover and tie-downs.
 - Apply hazardous goods signage.

During transit:

- Stick to approved route: no deviations unless authorised.
- Avoid stops: only stop for emergencies; report any unplanned stops.
- Notify disposal site: provide ETA once loaded.

At disposal site:

- Unload promptly: cover material immediately (lime if eggs).
- Inspect and record: document tipping and coverage.
- Washdown and disinfection:
 - Use geotextile mat or concrete pad.
 - Water blast interior bed of truck and exterior.
 - Spray with Virkon.
 - Inspectors verify cleanliness.
 - Hold vehicle for 15 minutes post-disinfection.

Personnel hygiene

- Dispose of PPE in double-lined sacks.
- Disinfect boots at boot wash station.
- Leave boots on site.

End-of-day procedures

- Clean and disinfect loader and excavator (if used).
- Bury any geotextile mat or other materials at landfill.
- Dispose of all PPE in designated burial pit.

Appendix B: Examples of specific biosecure transport types

These are examples only and the list is not exhaustive.

Figure 1: Transport types

Bathtub tipper truck/trailer



Open topped container



Lidded skip



Hook bin



Figure 2: Mobile cleaning and disinfection types

Single wash unit



Manual portable wash unit



Automatic portable wash unit



Portable disinfection unit



Appendix C: Step-by-step instructions

☒ Pre-Start Checklist

Action	Complete (Yes / No)
Disposal activities planned and transport requirements confirmed, incl. approved route	
Disposal site contacted at least 2 days prior (where practicable)	
Red line established and cleaning/disinfection site set up	
Only one exit point used (if possible)	
Vehicle cleaned before entering infected site, to ensure nothing extraneous comes onto the site	
Absorbent material placed at tailgate end e.g. sawdust, straw or commercial pads	
Tailgate sealed with rubber and silicone foam	
Leak points checked and sealed (see example - Figure 3)	
Polythene liner installed (if needed)	
Liner overlaps sides and tailgate correctly	
Carcasses/litter loaded with no spread	
Driver briefed on safety and movement protocols	
Contaminated material sprayed with MPI approved disinfectant	
Impervious top cover and tie-downs ready	
Hazardous goods signage affixed (refer to the Land Transport (Dangerous Goods) Rule 2005)	
Exterior of vehicle cleaned and disinfected before leaving site	

Figure 3: Bulk lines truck unit showing mechanical seals



The air seals are deflated.

Source: [Biosecure Transport test - Final Report \(Jun 2023\)2.docx \(cohesion.net.nz\)](#)

Step 1: Plan and set the red line at the infected site

1. Plan disposal activities:
 - Confirm disposal method, route, and timing.
 - Contact disposal site at least 2 days ahead.
2. Establish the red line:
 - Set the boundary at the farm exit.
 - Place cleaning/disinfection station at this point.
 - Use one exit only, if possible.
 - As areas are cleaned, shrink the red line accordingly.

Step 2: Prepare the disposal vehicle

1. Clean vehicle first:
 - Wash and disinfect before entering infected site to ensure nothing extraneous comes onto site.
2. Contain leakage:
 - Place absorbent material at tailgate end.
 - Seal tailgate with rubber and silicone foam.
 - Check and seal all leak points.
3. Install liner (if needed):
 - Use polythene liner with no joins on bottom/sides.
 - Ensure overlap across sides and tailgate.
4. Load contaminated material:
 - Use machinery to load carcasses/litter.
 - Avoid spread during loading.
 - Spray load with approved disinfectant.
5. Secure the load:
 - Cover with impervious top sheet.
 - Use ratchet tie-downs to secure.
 - Apply hazardous goods signage.
 - Tighten tailgate security seals.
6. Final clean:
 - Clean and disinfect vehicle exterior at red line exit.
 - Driver may inspect load once in clean zone.

Step 3: During transit

1. Notify disposal site:
 - Call with eta once loaded and ready to leave.
2. Stick to approved route:
 - No deviations unless authorised.
 - Avoid other poultry farms and take shortest safe route.
3. Avoid stops:
 - Only stop for emergencies.
 - Contract drivers need to report any unplanned stops to the transport manager.

Step 4: Offloading at disposal site

1. Verify SOP compliance:
 - Ensure the disposal site's management are aware their work instruction (from the operator's SOP) needs to align with the Disposal Guidelines
 - If the SOP does not meet required standards, the response team must work with the transport and disposal site operators to amend it.
2. Red line management at disposal site:
 - Establish a red line at the disposal site entry
 - Only the area receiving infected material needs to be within the red line if other areas can remain clean.
3. Unload securely:
 - Offload contaminated material promptly
 - Do not leave material in non-secure or uncontained areas
 - Cover material immediately after unloading.
4. Final cleaning:
 - Clean and disinfect the transport vessel and carrier before exiting the red line either from the infected site or the disposal site
 - Refer to the Cleaning & Disinfection Worksheet for details and Appendix 2 for examples of application methods.

Appendix D: Audit checklist

GENERAL

Farm contact name:		Contact phone:	
Farm address:		Farm email address:	
Contractor company		Notice of direction number (if required)	
Transport company:		Truck driver name:	
Transport company contact person and phone number:		Transport company email address:	
Movement control permit/s number/s (as required) (for off-site):		Landfill (or other) notified in advance and required notice given:	
Disposal site name (for off-site):			
Disposal site address (for off-site):		Disposal site email:	
Disposal site contact name (for off-site):		Contact phone:	

DOCUMENTATION

Document	Comment	Acceptable Y/N
Procedures (SOP)		
Site health and safety procedures		
Movement control permits, if required		

RECORDS

Records	Comment	Acceptable Y/N
Monitoring of loading and unloading of vessel • Loading photo/verbal evidence recorded (yes/no) • Leak test conducted (pass/fail) • Vehicle cleaned (pass/fail)		
Vehicle displaying "hazardous goods" sign		
Monitoring of cleaning and disinfection of vehicles departing Infected Place and disposal site		
Monitoring of end of day – machinery C&D and truck wash and C&D location		

REALITY (confirm that what is observed is consistent with the procedures and records viewed)

BIOSECURITY, VERY HIGH- And HIGH-RISK MATERIAL

Section	Details	Comment	Acceptable Y/N
Health and Safety	Appropriate PPE worn and hazards identified		
Biosecurity	Loading and unloading of infective material		
C&D	Cleaning and disinfection of vehicles departing Infected Place and disposal site		
End of run	Cleaning and disinfection of machinery and truck wash		
Wastewater	Contained and managed		

Requirement	Details	Comment	Acceptable Y/N
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 disinfected before crossing into and again upon exiting an infected area		
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		

Appendix E: Example SOP: biosecure transport (on-site) (farmer/operator use only)

Purpose

To ensure all vehicles entering and exiting the infected site are thoroughly cleaned and disinfected to prevent the spread of infectious agents, in accordance with the disposal guideline.

Scope

This SOP applies to all vehicles involved in transporting contaminated material to the disposal site during a biosecurity response.

Responsibilities

- **Cleaners:** conduct washdown and disinfection of vehicles.
- **Truck Drivers:** comply with PPE and hygiene protocols.
- **Site Supervisor:** ensure SOP compliance and coordinate activities.

Materials and equipment

- Geotextile fabric or concrete pad.
- Water blasters (interior and exterior).
- Virucide (e.g., Virkon) mixed to specification.
- Disinfection sprayers.
- Light towers (for night operations).
- PPE disposal station.
- Boot wash station.
- Excavator (for mat disposal).
- Lime (for carcass coverage).

Procedure

1. Site preparation:

- Lay geotextile fabric or confirm concrete pad is clean and ready.
- Fill water blaster tanks and disinfection sprayers with virucide.
- Set up light towers and refuel if operating at night.
- Establish PPE disposal and boot wash stations.
- Inspectors arrive and set up equipment.

2. Waste management:

- If tipped material includes carcasses or eggs, cover immediately with lime (~30 cm depth).
- Inspectors record the tipping process with photos and video.

3. Vehicle washdown:

- After tipping, truck backs into washdown/disinfection area.
- One cleaner water blasts the exterior, another the interior (start with cover rolled over, then roll back).
- Inspectors assess cleanliness before disinfection begins.

4. Vehicle disinfection:

- Spray interior and exterior thoroughly with disinfectant.
- Inspectors observe and verify full coverage.
- Once approved, vehicle exits washdown area.

5. Wastewater containment:

- All wastewater runs from the tarp to the sealed, leak-proof tank to prevent environmental contamination and disease spread.
- All wastewater will be treated with approved disinfectants (e.g. chlorine-based solutions) at recommended concentrations before discharge.
- See wastewater SOPs for more detail.

6. Post-disinfection hold:

- Vehicle must remain parked for **at least 15 minutes** to allow disinfectant to act effectively.

7. Driver hygiene (at the end of the shift):

- Drivers dispose of PPE in double-lined sacks.
- Drivers disinfect boots at boot wash station.
- Boots are left on site.

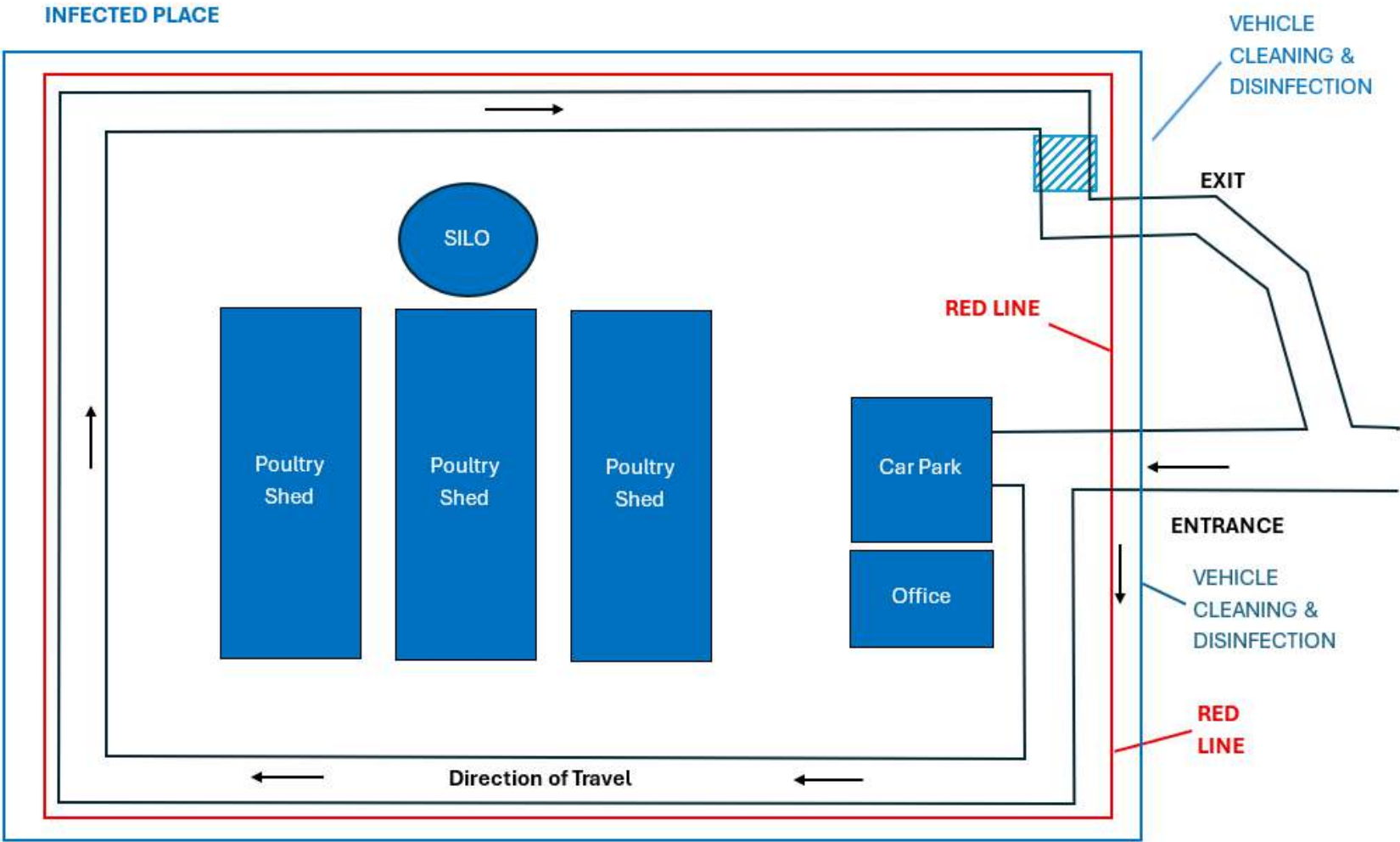
8. End of day procedures:

- Loader (if used) is washed and disinfected.
- Geotextile mat is rolled up and buried in a pit at the landfill.
- Excavator used for burial is then cleaned and disinfected.
- All personnel dispose of PPE in double-lined sacks for next-day burial.
- All personnel disinfect boots before leaving site.

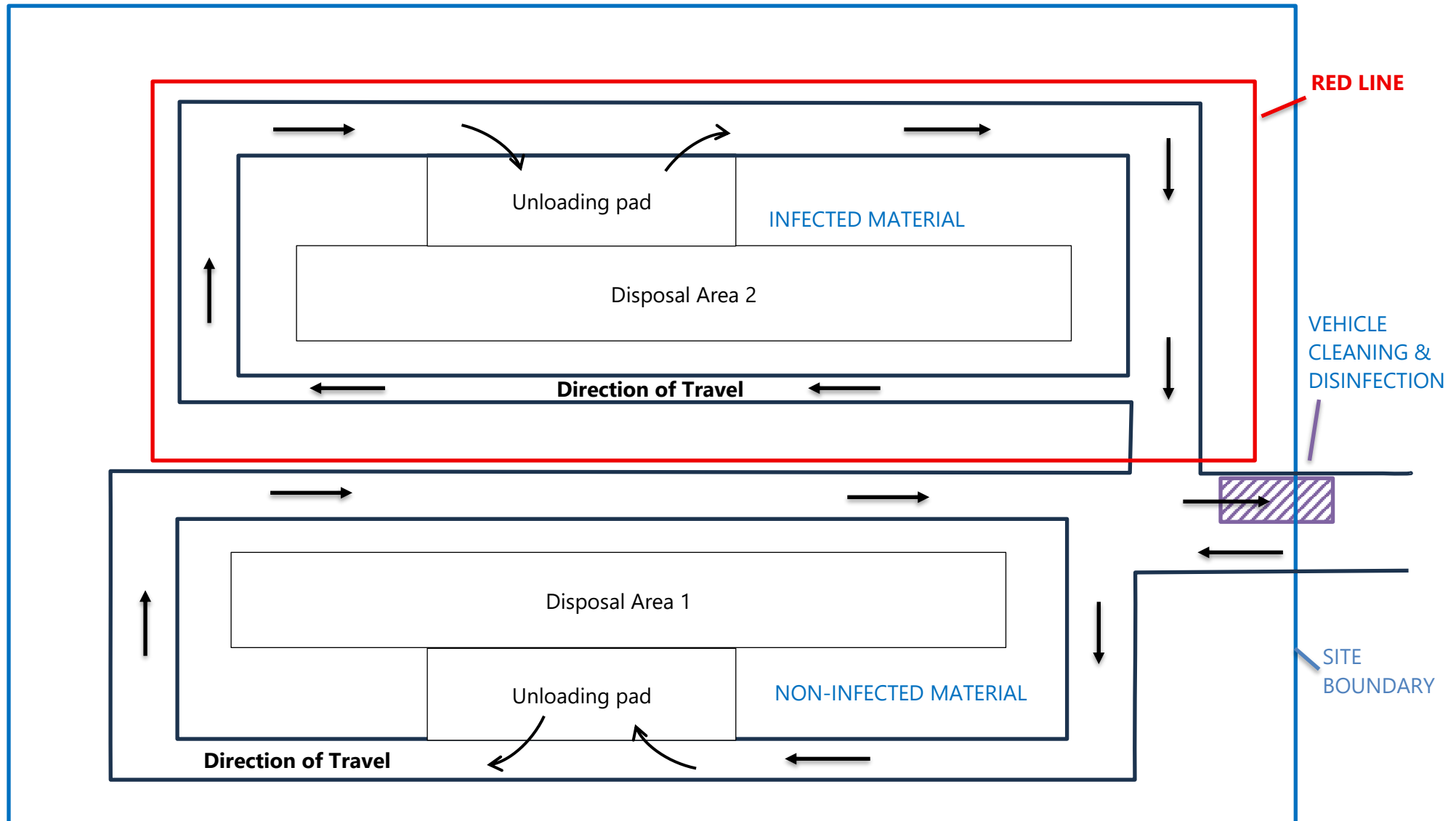
Records

- Tipping logs (photos/videos).
- Vehicle cleaning and disinfection checklists.
- PPE disposal logs.
- Corrective and preventative actions.

Examples of diagrams that can be included within SOPs to illustrate movement controls and red line:



DISPOSAL SITE (e.g. Landfill)



Appendix F: Fictional illustrative scenario (farmer/operator use only)

Free-range egg farm – on-farm burial¹

I run a small free-range egg farm with 3,000 hens. I own both the land and the birds. When bird flu hit, I managed the disposal myself using an on-farm burial pit. Early on, I realised biosecure transport isn't just for moving things off-site, as dust and feathers can blow in the wind and spread disease fast. That's the last thing my neighbours need. So I took containment seriously when moving contaminated material to the on-farm pit.

We buried around 6,000 kg of carcasses. I double-bagged them in polythene liners, sealed them in bins, and used the front-end loader with a tarp cover to stop anything blowing off. I sprayed the carcasses before sealing to reduce the disease load and dust. At the pit, I tipped, limed, and buried them straight away and logged every load.

We also had about 180 kg of contaminated eggs, including broken and belt-collected ones. I packed them into large plastic containers lined with absorbent material, sealed them with cable ties, and sprayed before and after loading. They went into the same pit as the carcasses, with lime cover.

Litter, about 1.5 tonnes, was scooped into bulk bins lined with polythene. I used a sealed tipper to move it, sprayed it after loading, and buried it with lime and compaction. All disposal was recorded.

The rock range and grass areas were contaminated too. I fenced them off and marked them as red zones. Nothing was removed, but those areas are now out of bounds and need time to fallow or reseed.

Some gear couldn't be cleaned, like the egg belts. I removed them, double-bagged them, and sent them off-site to landfill. That needed permits and coordination with the disposal site.

We set red lines around the shed, burial pit, and free-range zones. Every vehicle was cleaned and disinfected before entry and before exit. Everyone helping wore full PPE including coveralls, gloves, boots, masks and had spill kits on hand. I briefed the team and kept full records: checklists, disposal logs, and movement permits.

Broiler farm – off-site landfill disposal

I run a broiler farm across several sites, raising 40,000 birds. The processor owns the birds and I own the land. When bird flu hit one of our sheds, the processor's stock manager stepped in to coordinate disposal.

We shifted around 15 tonnes of carcasses and 5 tonnes of litter to an approved landfill. Carcasses went into sealed bulk bin liner trucks, lined with polythene, tailgates sealed tight. We sprayed the birds before sealing the bins and cleaned and disinfected the truck exterior before it left. At the landfill, they tipped the load, covered it immediately, and disinfected everything.

Litter went in separate sealed bins with absorbent material at the bottom. Same route, same hazardous signage. We cleaned and disinfected vehicles when entering and exiting our site. I was asked why we cleaned and disinfected vehicles coming onto site, rather than just when the trucks left. We wanted to ensure nothing extraneous came onto the farm as we already had enough issues. It was a wheel wash and quick wash over the equipment as needed.

Drivers never left their vehicles. We marked red lines around the infected sheds and the tipping zone. Every vehicle was leak-proof tested and disinfected before and after use. Drivers and loaders wore full PPE and carried spill kits. Everyone involved, me, the processor, the transport crew, and the landfill team, followed site-specific health and safety plans. We kept records of movement permits, disposal logs, and cleaning checklists.

1.