

Animal carcass disposal

March 2021, Primefact PUB21/202, Second edition

Animal Biosecurity and Welfare, NSW DPI

Importance of effective carcass disposal

Improper carcass disposal can have significant impacts on environmental, human and animal health. Poor carcass disposal can result in contamination of soil, ground water and water ways. Access to poorly disposed carcasses can also allow for significant disease spread through scavengers, mosquitoes and vermin.

Carcass disposal should occur as soon as possible after the animal has died. Careful planning and management of disposal is important to ensure the safety of the community, other stock, the environment and to minimise the risk of disease spread.

Animal owners and managers have a legal responsibility to ensure that disposal of carcasses does not adversely affect the environment. The NSW EPA has guidelines to minimise environmental contamination and should also be consulted for advice when considering options for disposal.

Your local council can also provide advice on how environmental impacts can be

managed when considering options for carcass disposal.

Safe handling of carcasses

Carcasses should be handled as little as possible.

Where possible use a machine (excavator or backhoe) to handle the carcass.

Appropriate personal protective equipment (PPE) should be worn when handling a carcass, especially when a zoonotic disease is suspected or if large amounts of dust, fumes or body fluids are produced.

PPE should include:

- Gloves
- Leather or rubber boots
- Clothes that cover exposed skin
- Eye protection
- A P2 face mask

Particular attention should be paid to avoid contact with any body fluids from the dead animal.

If you feel unwell after handling a carcass contact your private human health

practitioner or your closest [NSW public health unit](#).

Environmentally Safe Disposal of Carcasses

The preferred order for carcass disposal methods are

- Licensed Landfills
- Rendering and knackereries
- Burial
- Composting
- Cremation (Burning)

Disposal to licenced landfill is the preferred option in most instances especially where there are large mortalities or where onsite issues (e.g. size, soil type, water table etc.) prevent environmentally safe burial.

Burning carcasses may be preferred for infectious disease outbreaks such as anthrax where appropriate resources are available.

Further advice should be sought from Local Land Services, Council and local EPA offices who can assist in determining the most appropriate method of carcass disposal.

Licensed landfills

Disposal of carcasses into licensed landfills can be a very fast, inexpensive and effective option. The main advantages of using existing landfill sites for carcass disposal are that they are approved to receive animal carcasses and have the necessary infrastructure to manage long-term containment issues.

Waste disposal facilities such as a registered landfill site are licenced by the EPA and must meet the EPA guidelines for managing waste material

Rendering and knackereries

Carcasses may be able to be disposed of at knackereries or at rendering plants. The ability to use rendering plants or knackereries will depend on their willingness to receive product, suitability of product (e.g. degree of burns, emaciated stock, and amount of wool), plant capacity and cost of transport. The safe transport of carcasses must also be considered when using this option.

Burial

Burial can occur on or off site depending on the cause of death and, the land and equipment available. Burial is often an effective method of carcass disposal if pits are constructed, located and managed correctly.

Location of burial site

To reduce environmental impacts, an on-farm burial site should be set up as follows:

- On elevated land with a slope of less than 5%
- At least two metres between the water table and the base of the pit
- At least 200 metres from any surface waters (rivers, creeks, dams etc.)
- At least 300 metres from neighbouring houses, buildings or public areas

- On heavier soil of low permeability and good stability
- A safe distance from underground and aboveground infrastructure (e.g. powerlines, telephone line, gas line, water pipes, sewerage)
- Well away from the view of the general public

Construction of burial pit

The preferred equipment for constructing of burial pits is an excavator. Pit construction should only be undertaken by persons trained and licensed to operate the required machinery. At no time during or after the construction of the pit should people enter the pit.

The preferred method of digging a pit is to construct a deep, narrow, vertically sided pit (trench burial). The pit must be deep enough to allow the carcasses to be covered with at least two metres of soil. The cover soil can be slightly mounded after backfilling.

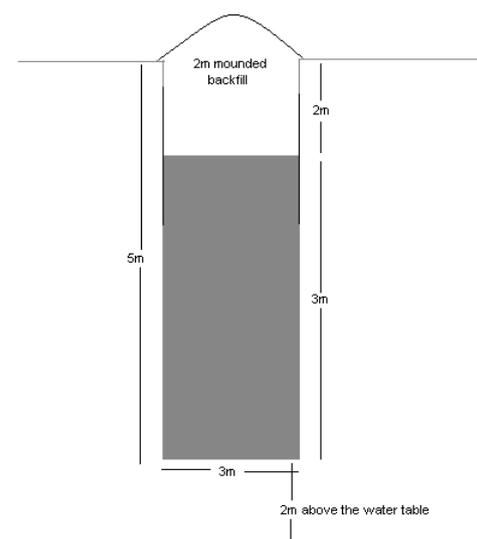


Figure 1- Traditional trench style burial pit

Suggested dimensions for constructing on-site burial pits are four to five meters in depth which results in three meters of carcass depth and the two required meters of soil cover (Figure 1). The pit should be no greater than three meters wide which helps create an even spread of carcasses in the pit. The length of the burial pit will be determined by the number of carcasses requiring disposal.

For more information on the construction of burial pits and how to work out the size pit required for your situation please refer to the [AUSVETPLAN Operational Manual for disposal procedures](#).

If land in the area that the pit is to be constructed is too unstable or there are work and safety concerns, a pit with battered (sloped) sides may be constructed (Figure 2).

Depending on the cause of livestock death and the number of carcasses to be disposed of, the pit may be required to be lined to prevent seepage of contaminated fluid into the soil and ground water. Contact information for the NSW Environment Protection Authority can be found at the [NSW EPA](#) website.

Management of burial pit

Before placing ruminants into a burial pit the rumen must be punctured to prevent gas build up causing the carcass to rise up out of the pit. While doing this care must be taken to prevent spillage of body fluids.

After the pit is closed the area should be fenced off to reduce exposure of other stock to the area and to help in the quick rehabilitation of the site. The site should

also be continually monitored for leakage of fluid that may need to be treated.

Composting

Composting is a natural process whereby beneficial microorganisms decompose and transform carcasses into a useful end product that is safe for the environment.

Composting must be managed correctly to achieve adequate carcass disposal and can be a time-consuming practice.

Technical information on composting animal and bird carcasses can be found on the NSW DPI website at

<https://www.dpi.nsw.gov.au/climate-and-emergencies/emergency/management/resources-and-publications> in Procedures - decontamination, destruction and disposal.

Cremation

Cremation refers to the burning of carcasses. Sufficient air flow is required to achieve the hottest fire and efficient combustion. Large amounts of fuel are required to fully burn a carcass which may be an issue due to fire restrictions in summer.

Before cremating carcasses on-site, your local fire brigade should be contacted in regard to local weather conditions, required permits and possible fire bans in your area. For more information on cremation please refer to the [AUSVETPLAN Operational Procedures Manual for disposal.](#)

Commercial cremation services are available in many areas. These services usually focus on the cremation of small

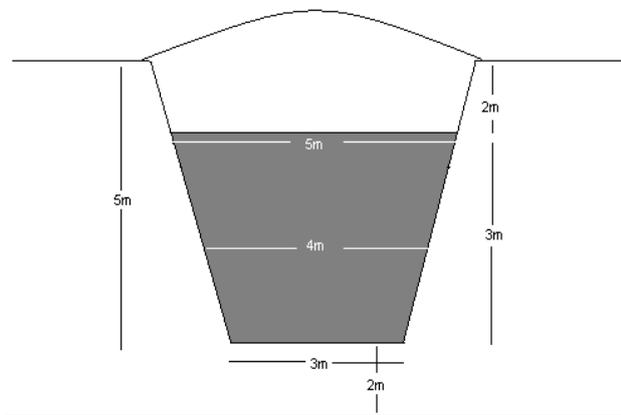


Figure 2 - Traditional battered burial pit

animals but may have the capabilities to cremate larger animals.

Important diseases

There are several diseases that require particular consideration when disposing of carcasses. These diseases can pose considerable threats to human and/or animal health.

Hendra virus

On-site deep burial is usually the recommended method of disposal for carcasses where Hendra virus is suspected.

It is preferable to bury the carcass where it is lying so it does not have to be moved.

Any carcasses should be handled as little as possible. Gloves, a P2 face mask and protective clothing should be worn by anyone within five metres of the carcass.

Treat all body fluids with caution and any ground area where body fluids have spilled should be disinfected.

If the carcass needs to be moved, enclose the head in a strong plastic bag and tie this off around the neck to help contain fluids. A chain can be attached to a leg to move the carcass. Any part of machinery and equipment that comes into direct contact with the carcass or with body fluids should be cleaned and disinfected.

Machinery operators should where possible remain within their cabins during the burial process and minimize any contact with potentially exposed areas.

For more information of the disposal of possible Hendra cases please refer to [Biosecurity Queensland "Guidelines for veterinarians handling potential Hendra virus infection in horses- section 11- Carcass disposal"](#).

Anthrax

Carcasses of animals that have been infected with anthrax should be disposed of under the supervision of government officers using methods designed to eliminate contamination.

Burning is the preferred way to dispose of infected anthrax carcasses in Australia, unless it is precluded by other factors.

People handling diseased animals, carcasses or tissues must wear gloves and protective clothing and follow appropriate personal disinfection procedures at the conclusion of such work. This is to protect them and to prevent further spread of contamination.

Machinery and equipment used to dispose of carcasses, manure and other contaminated items should be disinfected.

For more detailed information on the disposal of carcasses infected with anthrax please refer to the [NSW Department of Primary Industries Primefact on anthrax](#)

Botulism

Botulism infected carcasses must be correctly disposed of to prevent more disease outbreaks.

Deep burial is the preferred method of carcass disposal. Burning is not recommended as livestock are attracted to any remaining ash or carcass which can spread the disease and cause multiple stock deaths.

Deep burial pits should be constructed following the guidelines provided earlier in this document.

Transporting carcasses for offsite disposal

If carcasses must be moved the movement of the carcass must be undertaken carefully. When transporting carcasses there is a high risk of spreading infectious material.

When moving carcasses planning and co-ordination is required:

- Make contact with the receiver to ensure they agree to receive the carcass and dispose of it.
- Arrange bio-secure transport (transport that will not leak body fluids or expose people or other animals to the carcass).
- Arrange machinery to load the carcass into this transport.
- Manage body fluids. This may require bagging, use of a body bag or placing carcasses in spill proof containers. Disinfect any spillage that occurs.
- Make sure the carcass can be safely managed at the destination.
- All equipment and machinery used to transport carcasses must be thoroughly cleaned and disinfected after use.

Transporting waste material may breach EPA waste disposal guidelines. The EPA should be consulted whenever considering off site disposal of waste.

Inappropriate carcass disposal

The inappropriate and illegal dumping of livestock carcasses on public or private land or in waterways can cause environmental and health risks such as:

- Pollution of stock and domestic water supplies
- Contamination of town water supplies
- Contamination of ground water
- Animal disease outbreak
- Public health risk

There are severe penalties for illegal dumping of carcasses.

Further information

For more detailed information regarding the suitable disposal of animal carcasses specific to your circumstances and location please contact your local council.

The following websites will also provide more detailed information about carcass disposal.

<https://www.dpi.nsw.gov.au/climate-and-emergencies/emergency/management/resources-and-publications>

[AUSVETPLAN Operational Procedures Manual for disposal.](#)

[Biosecurity Queensland veterinary guidelines](#)

For general inquiries regarding biosecurity, phone 1080 680 244 or email

animal.biosecurity@dpi.nsw.gov.au

PUB21/202 (previously Primefact 1616 – PUB17/930)

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