NERC SCIENCE OF THE ENVIRONMENT

The Badger Vaccination Process

UNIVERSITY OF EXETER

Animal & Plant Health Agency

Department for Environment Food & Rural Affairs

NATURAL ENGLAND

National Trust

THE wildlife TRUSTS

SECTION 1

Introduction

The BadgerBCG vaccine was licensed in 2010 and is recognised as an effective means of reducing the transmission of TB in badger populations. For a brief review of the science which underpins badger vaccination read the two page fact sheet which can be found here on the TBhub website.

Badger Vaccination

Badgers can act as a wildlife reservoir for *Mycobacterium bovis*, the bacterium which causes tuberculosis (TB) in cattle. Badger vaccination aims to reduce the transmission and spread of the disease in the badger population with the intention of reducing the risk of cattle contracting TB.

How are badgers vaccinated?

- Traps are deployed near signs of badger activity (setts, runs or latrines).
- Traps are usually locked open and pre-baited with peanuts (typically for 7-10 days).
- Traps are set to capture for two consecutive nights.
- Traps are checked in the early morning and captured badgers are vaccinated with BCG (the same vaccine used in humans), temporarily marked and released.

How often does vaccination take place?

Trapping for vaccination (as described above) takes place once per year at each sett or target area, typically for four years. It is unclear how long the vaccine is effective in individual badgers. Annual vaccination will result in some animals being vaccinated several times, but also aims to maintain and increase vaccine coverage by vaccinating new cubs or immigrants into the population.

What effect does the vaccine have on badgers?

The effects of badger vaccination by injection have been evaluated in several captive experimental studies [1,2] and during a four year field study in Gloucestershire [2,3]. Although vaccination with BCG will not guarantee protection from infection, meaning some badgers may still become infected, these studies provide good evidence for the following beneficial effects:

- **Vaccination reduces the likelihood of badgers developing lesions or excreting TB bacteria** [1,2].
- **Vaccination reduces the rate of new infections (measured using diagnostic tests) in badgers by 76%** [3].
- **Vaccinating more than 1/3 of adults in a badger social group reduces new infections (measured using diagnostic tests) in unvaccinated badger cubs by 79%** [3].

Will the vaccine work on badgers already infected with TB?

There is no evidence that vaccination will have either a positive or negative effect on badgers that are already infected with TB. Even if vaccination has no effect on infected badgers this does not mean that it cannot reduce TB in badger populations. Badgers typically live for 3-5 years. Over a four year programme, vaccination should reduce new cases of TB in badgers (as in the Gloucestershire field trial) and infected animals will gradually die off. The combination of these processes should lead to a reduction in the number of infected badgers in an area.

Vaccinating badgers involves catching wild badgers in cage traps and injecting them intramuscularly with the BadgerBCG vaccine (see section 2 for a description of this process). In some cases wildlife vaccination can be undertaken using an oral vaccine (e.g. the vaccine used to control rabies in European fox populations). However, despite various research trials undertaken in the UK and other countries, a licensed oral badger vaccine is not available. Vaccination by intramuscular injection is the only method currently available for badger vaccination.

Badgers are a protected species in the UK (Wildlife and Countryside Act 1981, Protection of Badgers Act 1992). This means that a licence is required to trap (and mark) them to enable vaccination. In England, this is usually the CL48 and CL49 class licenses which can be applied for on the gov.uk website here, while vaccination in Wales requires a licence from the Welsh government. The act of injecting the vaccine is classed as an act of veterinary surgery, which means that those trapping and vaccinating badgers also need to be properly trained.

Further details of the steps required for obtaining a licence for badger vaccination, including training requirements, badger surveys, costs and other subjects is covered in the accompanying document "Planning a badger vaccination project".

You cannot legally **trap** a badger unless:

- You attend and complete APHA training module 2 or equivalent training e.g. an approved NFU badger trapping course and receive your licence confirmation

You cannot legally **vaccinate** a badger unless:

- You have attended an approved vaccination training course (currently the only approved course is APHA training course module 3) and have received your licence confirmation. OR…
- You are a qualified, registered veterinary surgeon holding the rquired licence or vaccinating badgers in thepresence ofa licence holder

All aspects of the vaccination process are shared with those attending the badger vaccination training courses. Detailed information is also contained within online the guidance document "How to cage-trap, vaccinate and mark badgers to control bovine TB" available on gov.uk. The information in this document here is designed to supplement but not replace these materials. For more information on badger vaccination training contact: badgervaccine@apha.gov.uk

This guide was originally created by Dr Andy Robertson in 2020 (updated June 2025) , in collaboration with organisations listed below:

- Animal and Plant Health Agency
- Defra
- Natural England
- Cheshire badger vaccination project
- Derbyshire wildlife trust
- The National Trust

Over time the rules and guidance around badger vaccination may change, for the latest information on badger vaccination you should contact:

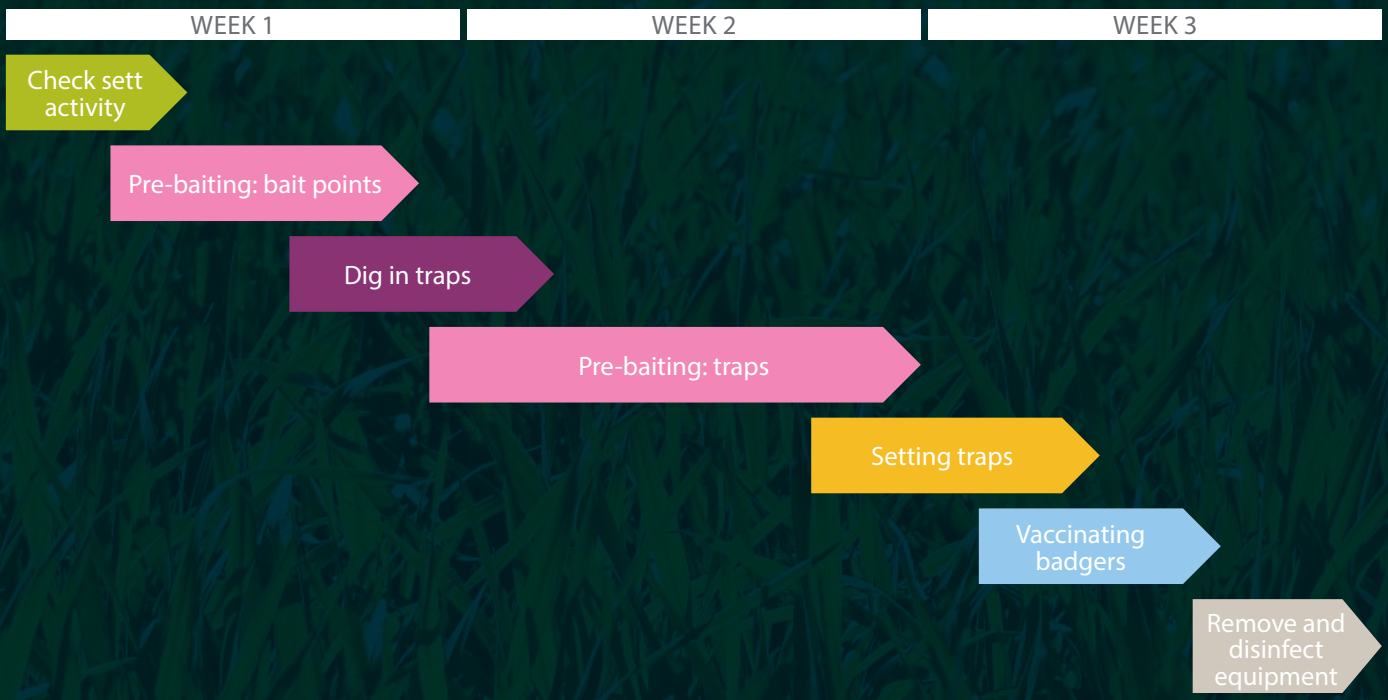
- Natural England: btbvaccination@naturalengland.org.uk
- APHA: badgervaccinetraining@apha.gov.uk
- DEFRA: badger.vaccination@defra.gov.uk

Although this document outlines the process of vaccinating badgers in England, many of the steps and considerations are similar in Wales. For more specific advice on vaccinating badgers in Wales contact the Welsh Government.

SECTION 2

The vaccination process

The badger vaccination process involves multiple stages, taking approximately two to three weeks to complete. These stages and their approximate timings are illustrated below. If badgers quickly take to the bait (typically peanuts) and are tolerant of human activity, it may be possible to complete the process more quickly. However, in some cases badgers may be quite wary so that additional pre-baiting may be required.



If the vaccination area is small, or if you have a lot of resources at your disposal, then you may be able to vaccinate the whole area at the same time. If not, then you will need to divide the area up into a series of sub areas or 'trap rounds' each involving one cycle of the vaccination process. Typically one trapping team (e.g. a lone trapper or a team of two operators working together) can cover 1-2km^2, or 10-20 traps in a single vaccination morning. In areas with lower badger densities it may be possible for a single team to cover a larger area. For more information see the Planning a Badger Vaccination Project section 2.7.

2.1 Pre-vaccination sett checks

From your badger survey (see Planning a Badger Vaccination Project section 2.5) you will have a good idea of where badger setts, runs and latrines are located. However, the survey may have taken place several months before the vaccination process begins, and badger activity may have changed on the site in the meantime. It is therefore recommended that you carry out a 'sett check' prior to vaccination to see if badger activity has changed in recent weeks. The sett check will also help to identify potential trapping locations and estimate the number of traps required.

The sett check is not a detailed formal process, it simply involves visiting each sett to see if it is sufficiently active to be targeted for trapping. It may also be useful to record levels of activity (active holes /partially active holes/ inactive holes etc.) using a map, notepad or the VF2 sett check form.

TIP

Wildlife camera traps can be a useful tool for checking badger activity during the process. It is often not possible to work out the exact numbers of badgers in an area, but it will confirm that badgers are present.

2.2 Pre-baiting and deploying traps

Pre-baiting is a crucial part of the vaccination process. Badgers can be wary animals and the aim of pre-baiting is to get badgers used to visiting certain points in the landscape, regularly taking bait, and ultimately entering traps. Trapping without first carrying out a period of pre-baiting is unlikely to be successful.

The bait

The recommended bait for badger trapping is animal grade peanuts, with one heaped handful of bait deployed at a time. Alternative baits could include wheat, maize or rolled oats. In areas where badgers are wary or reluctant to take the bait its attractiveness can be enhanced by adding golden syrup, peanut butter, or fruit.

Bait points

Prior to digging in any traps it is advised to create a series of 'bait points'in the vaccination area. Bait points consist of a hole created with a spade which is then filled with peanuts or other bait (see bait types above). Bait should be buried (a spade's depth) and covered by stamping/pressing the sod of earth over the bait, and placing a flat stone (roughly 6-10 inches square, and 3-5kg in weight) on top to deter rodents and non-target species.

Bait points should be located close to intended trapping locations (setts, runs or latrines) to get badgers used to visiting those locations and taking bait ahead of trap deployment. Bait points will also give you an idea of the level of badger activity in an area and how willing badgers are to take bait. Once bait points are being regularly hit by badgers (stone moved and bait taken), traps should then be dug in at those locations.

Deploying traps

Traps should be placed close to active badger setts and runs within the vaccination area, informed by active bait points. Placing traps at latrines or runs away from setts ('remote trapping') at the edges of the area is also recommended, in order to target badgers living in setts on surrounding land as they enter/leave the vaccination area. Careful consideration should be given to the distance remote traps are placed from the main sett, particularly during the early part of the season (May – July) during which time young cubs may be caught. If young cubs are caught long distances from their main sett, they may not be able to easily navigate back there from the point of release which could compromise their welfare.

All traps should be 'dug in' to the ground using a spade so that the mesh bottom of the trap is covered with a layer of soil. This helps to keep the trap stable, and means that badgers do not have to walk on the metal bars on the floor of the trap. If the ground is very hard it may be easier to use a bucket to collect loose soil from a nearby location and tip this into the trap to cover the bottom.

Tips on trap placement

Trapping on runs:

Do not place traps directly covering or blocking runs. Instead, place traps just off the run so that badgers using the run in either direction will pass the open door of the trap.

Trapping near sett entrances:

When placing traps close to setts, avoid placing them on spoil heaps or so they obstruct sett entrances. Ideally place traps no closer than 2-3 metres from the nearest sett entrance.

Deploy traps gradually:

Ideally deploy traps over several days. For example, if you are placing six traps at one sett, consider gradually deploying them two or three at a time, depending on levels of bait uptake. This minimises disturbance, and reduces the chance that badgers will move away from the sett.

Make use of cover:

Place traps to make use of natural cover, such as hedges or trees. This is important, as this provides shelter against the elements and also helps to keep the traps hidden, but take care that branches or other vegetation do not obstruct the door, or interfere with the trapping mechanism on the back and roof of the trap. Do not place traps in open exposed locations such as in the middle of a field with no cover.

Make sure traps are secure:

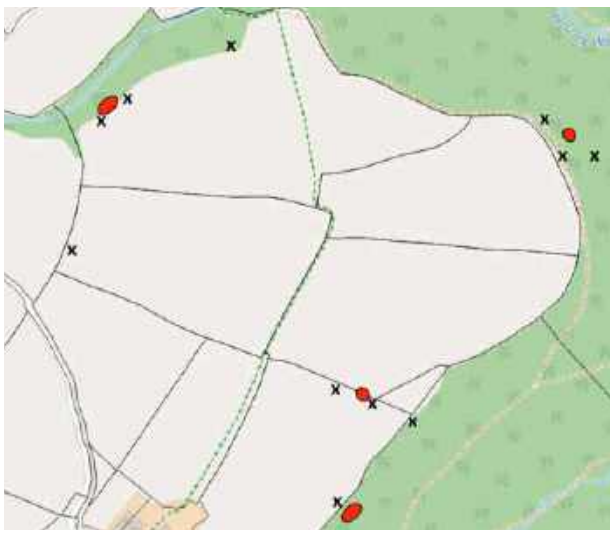
Traps need to be dug in so that they do not wobble or move about. On sloping ground take steps to make sure that traps will not roll or slide downhill. It may be necessary to dig a ledge of level ground to place the trap and use wooden stakes to provide additional support if required.

Label traps:

Label traps using tags or laminated paper. Giving each trap a unique number will help to keep track of traps in stock and of those being used for vaccination. A clear label containing the information about the vaccination project and a contact number is also recommended, in case traps are located by members of the public.

Create a trap map:

Once traps are in place, create a map showing trap locations using either a printed map or a sketch. This will ensure that no traps are forgotten and will also make sure that if a fieldworker is absent (e.g. due to illness) other people can locate the traps.



Trap locations are shown as Xs, red areas are badger setts.

How many traps will you need?

The number of traps will depend on the number of badgers in the area, with an active sett requiring anywhere from 1-10+ traps depending on activity. The survey data for your area should give you a good estimate of the number of social groups (main setts) within the area. However, remember that group size can be variable (depending on habitat and food abundance) and that badgers associated with setts on neighbouring land outside the survey area may also be trapped. Generally it is good practice to gauge the number of traps required based on sett activity and on levels of bait uptake throughout the vaccination process.

Pre-baiting traps

Once deployed, traps should be locked open (use 2mm wire or cable ties) and pre-baited, so that badgers become accustomed to entering them and taking bait. It is recommended that traps are pre-baited for 7-10 days, although the amount of time will depend on how quickly the badgers start taking the bait.

Start with bait points just outside of the trap entrance. Once these are being taken, move the bait inside the trap entrance and gradually towards the back of the trap over several days. To place bait at the back of the trap use a spade or a plastic tube (through the roof of the trap). To avoid bait spilling out of the trap it may help to create a small depression in the soil (a 'nut nest') before adding the bait. Use large flat stones (roughly 6-10 inches square, and 3-5kg in weight) to cover bait and deter non-targets. If non-target species are a particular problem another option is to place the bait in a small terracotta dish, which is then covered by the stone, to prevent them digging underneath.

Avoid scattering/spilling bait:

Where possible aim to place the bait in a 'neat' pile inside the trap. Avoid spilling bait around the trap as this may attract non-target species and encourage badgers to dig under the trap from the side/rear. If badgers do dig under the trap to access the bait you can used large logs or other natural objects stacked along the side/rear of the trap to deter this activity.

Replacing bait in traps:

If peanuts are not eaten after 2-3 days they should be removed from the trap and replaced with fresh peanuts to avoid them becoming unpalatable. Replace mouldy bait where required.

Pre-bait in the afternoon:

It is advised that pre-baiting is done in the afternoon to avoid non-targets interfering with bait before badgers are active. Badgers are nocturnal, typically emerging from their setts at dusk, or 1-2 hours either side of sunset. This may vary between groups and some badgers may be active earlier, particularly in hot dry weather. For this reason it is recommended that pre-baiting is not conducted late in the evenings, as this may disturb badgers emerging from their setts.

Check latrines:

It is often possible to see evidence of what badgers are eating by inspecting fresh faeces in latrines. You can check latrines to confirm whether badgers are eating peanuts.

TIP

Camera traps can also be a useful tool for monitoring bait uptake and whether badgers are entering traps.

2.3 Setting traps


1


2


3


4

Once the bait inside the traps is being regularly taken by badgers the time has come to set the traps to catch. It is advised that trapping is conducted over two successive nights (at each sett / trapping location). A third or fourth night may be required depending on capture numbers, but it is not recommended to trap at the same location for more than four consecutive nights. As with pre-baiting, traps should be set in the afternoon to minimise capture of non-targets, but not too late as to disturb badgers.

1) Place one heaped handful of peanuts towards the back of the trap, using your hands, a spade or some pvc pipe.

2) Cover the bait with a large flat stone – the stone should have plastic coated garden wire (2mm diameter) tied around it with a length of wire extending off the back (see photo). It may help to drill holes in stones to make attaching the wire easier.

3) Tie 2-3 ply natural jute garden twine (untainted) to the end of the wire and feed this up the back and along the roof of the trap.

4) Tie the twine securely to the trigger mechanism at the front of the trap.

5) Check the trap mechanism is working and that the door closes securely.

It is also possible to use only twine (i.e. no wire) to set traps. See the guidance document "How to cage-trap, vaccinate and mark badgers to control bovine TB" available on gov.uk for more information.

The number of traps set to catch at each sett or trapping location, along with the 10 figure grid reference for the location and the person who set the trap must be recorded on a VF3 - Trapping & Welfare Form or on the WVS TrAPP app. If it's easier, this information can be recorded in a notebook and later entered into a form (See section 2.6 Record keeping).

Weather conditions

It is a licence condition that traps must not be set to catch when weather conditions are, or are likely to be, extreme. It is not advisable to trap badgers in heavy rain, as badgers' coats may become muddy and saturated with water such that they struggle to stay warm. Check the weather forecast regularly and if heavy rain is forecast it may be necessary to delay trapping until the weather is drier. If trapping in hot dry weather make sure the traps are in shade or have sufficient cover or delay trapping if necessary.

What time of year is best for trapping badgers?

Vaccination can be carried out at any time during the open season from May – November. However, seasonal changes in weather, food availability and badger behaviour mean that the effectiveness of trapping may vary over this time. Higher capture rates are generally achieved in June – July and capture rates may fall towards the end of the season and when weather is wetter or colder.

TIP

As badgers can be wary of new objects and smells, try to change as few things as possible prior to setting the traps.

2.4 Checking traps and vaccinating badgers

On the morning of vaccination you will hopefully have captured several badgers, which then need to be vaccinated and released. All traps should be checked and badgers processed as early as possible to minimise stress to the animals. However, avoid vaccinating in the dark, it must be light enough to see what you are doing to avoid operator injury. Aim to check traps at first light, depending on the time of year all badgers must be vaccinated and released by the following times:

Month	Time when badgers must be released by
May to August	09:30 am
September	10:30 am
October to November	11:30 am

Vaccinators should therefore set a number of traps that they are confident can be checked and processed within these times. Typically one person or trapping team can check and process 10-20 traps in one morning, depending on location and number of badgers caught.

While vaccinating is it recommended that you wear the following protective equipment:

Gloves (disposable – nitrile powder free)

Water proof jacket

FFP3 face mask, face fitted to the user

Water proof over trousers

Eye protection (optional)

Preparing/Reconstituting the vaccine

The BCG vaccine is supplied in two parts which need to be combined prior to administration, in a process described as 'reconstitution'. Vaccine reconstitution should be carried out on the morning of vaccination (do not do this the night before) and it should take place away from the traps to minimise unnecessary stress to the badgers.

The two components:

1) Freeze dried BCG presented in a dark ampoule/vial (to provide protection from UV light).
2) The diluent, a colourless liquid in a clear ampoule which is added to the BCG to create a liquid vaccine suitable for administration.

BadgerBCG

Vaccine Diluent

BadgerBCG (Danish BCG strain) is the strain of BCG licensed for use in badgers.

Reconstituting the vaccine involves adding the diluent to the vaccine, and ensuring the two are properly mixed. The process of reconstitution will be covered in detail in the approved vaccination training course.

Videos describing vaccine reconstitution can be found on youtube:

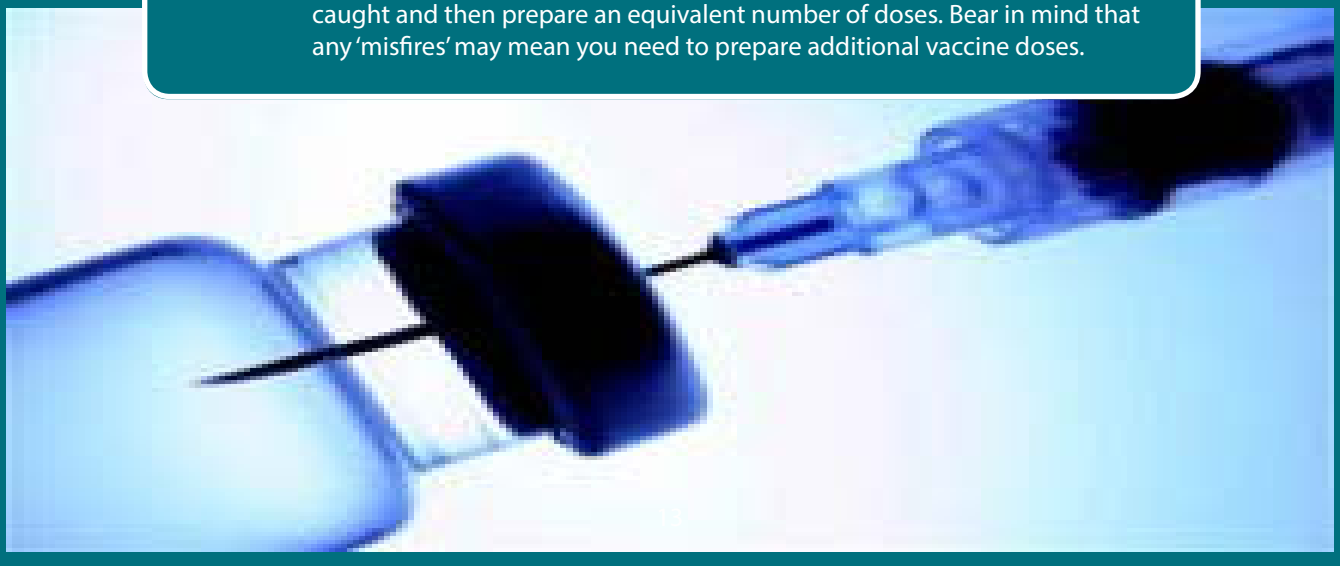
BadgerBCG – https://youtu.be/lfC-n2Z93PU

BCG is a live vaccine. It needs to be stored between 2-8°C prior to use (you should set your vaccine fridge temperature at 5 °C). Once the vaccine is taken out of the fridge and reconstituted, it must be used within 4 hours (BadgerBCG), or 6 hours (InterVax BCG).

If the vaccine is stored in a fridge close to the vaccination area, it may be possible to reconstitute the vaccine, travel to the site and vaccinate the badgers inside of the 4 hour window. If not, it may be necessary to use a portable vaccine fridge to transport the vaccine into the field. Portable fridges run on a battery or the 12V supply in a car.

TIP

As the vaccine has to be used within 4 hours of reconstitution, to avoid wastage, it is not advisable to prepare a large number of doses before you know how many badgers you have captured. One option is to arrive at site and quickly check all cage traps to see how many badgers have been caught and then prepare an equivalent number of doses. Bear in mind that any 'misfires' may mean you need to prepare additional vaccine doses.



Vaccinating badgers

If a badger has been captured you can often clearly see the animal in the trap from some distance. Approach the trap slowly and quietly. Badgers will often be asleep or curled up, but in some cases they may be more alert. Badger cubs are typically more active and you may hear them making high pitched chittering noises.

Prior to vaccinating badgers it is important to carry out a welfare assessment to ensure that the animal is fit to be vaccinated. This involves observing the animal in the trap. Five different parameters must be assessed:

1) Alert (general behaviour)
2) Breathing
3) Condition (coat and muscle mass/weight)
4) Injuries
5) Movement

This process will need to be repeated after vaccination to check for any adverse reaction to the vaccine and to ensure that the animal is fit to be released. The outcome of the welfare assessment must be recorded on the VF3 form or the TrAPP app.

It is also important to check the badger is not already vaccinated. This will be indicated by a large fur clip and stock mark on the rump of the animal. Any animal with a fur clip/stock mark should be released immediately (not vaccinated again), following a welfare assessment to ensure it is fit to release.

Once you are happy that the badger is fit for vaccination the vaccine can then be administered.

Administer the vaccine by injecting into the thigh muscle. The needle should be inserted at a 90 degree angle to maximise the likelihood of delivering the vaccine intramuscularly (rather than into subcutaneous fat). Gently depress the plunger to release the vaccine and then remove the needle.

In the majority of cases badgers can be vaccinated without the need to restrain the animal. However, in some cases, badgers may be very active and require restraining using wickets. The purpose of using the wickets is to reduce the space available to the trapped badger thereby making vaccine administration safer by preventing the badger moving around the cage trap.

Once vaccinated, mark the badger by clipping an area of fur with curved scissors to remove the outer dark guard hairs. This will expose a fluffy white undercoat. Spray this area with a brightly coloured stock marker. Aim to mark animals on the back and be careful not to spray their eyes/face.

TIP

Use a different coloured stock marker for each trapping round. It is then possible to identify badgers which have been re-trapped from other areas.

Once the badger has been vaccinated and marked, take a step back and briefly observe the badger to check there has been no adverse reaction to the vaccine.

If you suspect the badger has had an adverse event

The lay vaccinator must report this to the directing or attending vet for guidance (see Planning a badger vaccination project section 2.3 for more information on veterinary roles).

Release the badger by opening the trap door. Make sure you are not blocking the exit path. Often the badger will move quickly to leave the trap, but in some cases they may be unwilling to exit. In those cases try and step back, or orientate yourself (or a second person) at the back of the trap to encourage them to exit the trap.

Disposing of needles and sharps

Make sure that empty needles, syringes and a vaccine vials are disposed of safely in an appropriate purple lidded 'cyto' sharps bin.

Non-target species

There are a number of non-target bird and mammal species that may be caught in badger traps. In most cases, non-targets such as rabbits, pheasants or foxes can be released unharmed.

If a non-target animal appears injured, veterinary advice must be sought if necessary. Some potential non-target species are listed under Schedule 9 of the Wildlife and Countryside Act (1981), these include:

- Grey squirrel
- American mink
- Muntjac deer

It is illegal to release these species into the wild. Squirrels should be humanely dispatched using an air pistol, or sack and a blunt object by a suitably trained and competent person. For American Mink, or Muntjac deer, contact a vet so that they can be humanely euthanised.

2.5 Disinfecting equipment

Bovine TB is caused by the bacteria Mycobacterium bovis, which can potentially survive in a range of environments including soil, faeces and water. It is therefore good practice to carry out regular disinfection of boots, vehicles and other equipment to reduce the chance that bacteria, or other contamination will be spread while vaccinating. For a list of approved disinfectants see http://disinfectants.defra.gov.uk/DisinfectantsExternal/Default.aspx?Module=ApprovalsList_SI

Boots/wellies

Boots should be disinfected when arriving and leaving a farm/site. This should be one of the first things you do as you arrive on site, and the last thing you do before you leave. While moving around one contiguous farm property (ie. from sett to sett within land under the same ownership) you do not need to disinfect your boots, but should disinfect boots when you move between different properties.

Vehicles

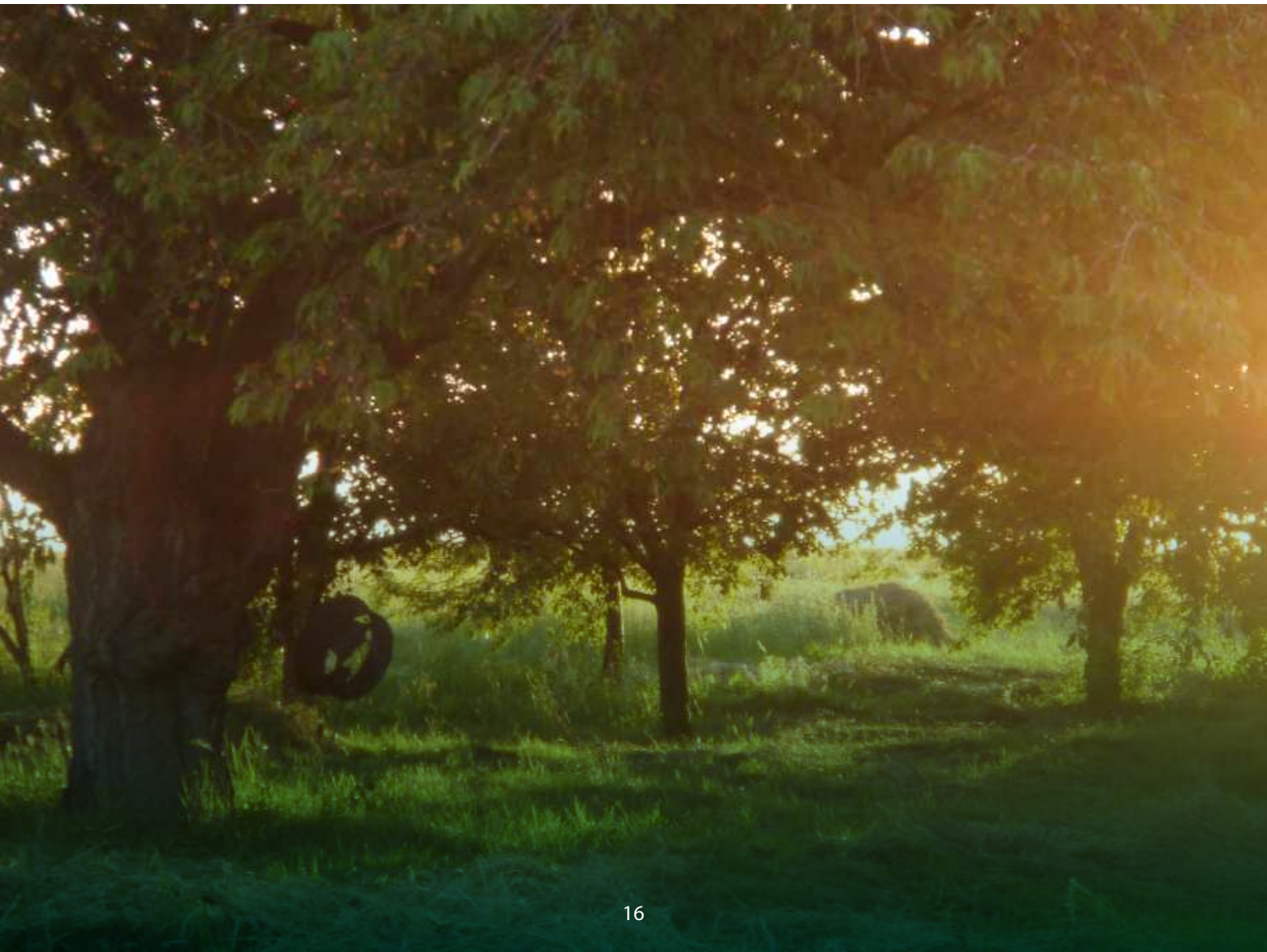
It is good practice to disinfect vehicle wheels or other dirty areas (ie wheel arches) as you leave a farm. This should be done using a spray bottle filled with approved disinfectant.

Wickets and scissors

These equipment can come into contact with badgers. It is recommended that they are cleaned and disinfected between setts by using disinfectant spray and paper towels.

Badger traps

Once trapping has finished, as much mud as possible should be scraped or shaken off cage traps and they should be removed from the site. Traps should be steam cleaned using a high-pressure steam cleaner with a water temperature of at least 100°C, or thoroughly disinfected and cleaned using an approved disinfectant.

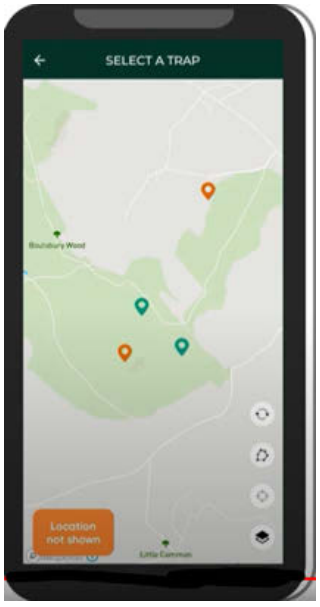


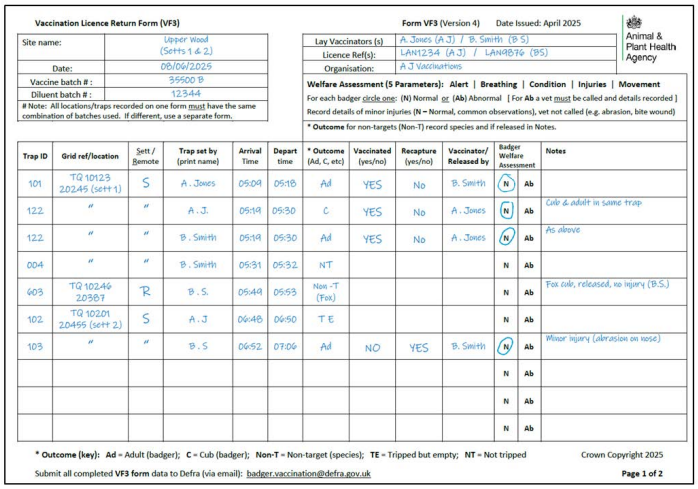
2.6 Record keeping

Throughout the vaccination process there are key pieces of information to be recorded. Some of these are good practice, while others are a specific requirement of the vaccination licence.

Trapping and vaccination data must be recorded using either the TrAPP app (recommended) or the paper VF3 form. The TrAPP app is available on all major app stores, and access details are provided upon licence confirmation. Trap locations are mapped, with key details such as time and setup information recorded when a registered trapper sets traps for capture. On vaccination mornings, capture details—including whether a badger was caught, its age, welfare status, and vaccination information—must be entered through a series of straightforward forms and questions. This data is then uploaded online.

A video tutorial demonstrating how to use the TrAPP app is available on YouTube here





Vaccination Licence Return Form (VF3)

Form VF3 (Version 4) Date Issued: April 2025

Animal & Plant Health Agency

Site name:	Upper Wood (Setts 1 & 2)
Date:	08/06/2025
Vaccine batch # :	35500 B
Diluent batch # :	12344

Note: All locations/traps recorded on one form must have the same combination of batches used. If different, use a separate form.

Lay Vaccinators (s)	A. Jones (A.J) / B. Smith (B.S)
Licence Ref(s):	LAN1234 (A.J) / LAN9876 (BS)
Organisation:	A.J Vaccinations

Welfare Assessment (5 Parameters): Alert | Breathing | Condition | Injuries | Movement

For each badger circle one: (N) Normal or (Ab) Abnormal [For Ab a vet must be called and details recorded]

Record details of minor injuries (N – Normal, common observations), vet not called (e.g. abrasion, bite wound)

* **Outcome** for non-targets (Non-T) record species and if released in Notes.

Trap ID	Grid ref/location	Sett / Remote	Trap set by (print name)	Arrival Time	Depart time	* Outcome (Ad, C, etc)	Vaccinated (yes/no)	Recapture (yes/no)	Vaccinator/ Released by	Badger Welfare Assessment		Notes
101	TQ 10123 20245 (sett 1)	S	A. Jones	05:04	05:18	Ad	YES	No	B. Smith	N	Ab	
122	"	"	A.J.	05:19	05:30	C	YES	No	A. Jones	N	Ab	Cub & adult in same trap
122	"	"	B. Smith	05:19	05:30	Ad	YES	No	A. Jones	N	Ab	As above
004	"	"	B. Smith	05:31	05:32	NT				N	Ab	
603	TQ 10246 20987	R	B.S.	05:49	05:53	Non -T (Fox)				N	Ab	Fox cub, released, no injury (B.S.)
102	TQ 10201 20499 (sett 2)	S	A.J	06:48	06:50	T E				N	Ab	
103	"	"	B.S	06:52	07:06	Ad	NO	YES	B. Smith	N	Ab	Minor injury (abrasion on nose)
										N	Ab	
										N	Ab	
										N	Ab	

* **Outcome (key):** Ad = Adult (badger); C = Cub (badger); Non-T = Non-target (species); TE = Tripped but empty; NT = Not tripped

Submit all completed **VF3 form** data to Defra (via email): badger.vaccination@defra.gov.uk

If using the app isn't an option or the circumstances don't allow it, you can instead complete the VF3 paper form. This form collects key details about the vaccination site, the registered personnel involved, and vaccine information in the top section. Below, individual rows are designated for each trap, where you can record the location, the date it was set (and by whom), as well as the relevant information gathered when checking the traps on vaccination mornings.

For guidance on using the VF3 form, a tutorial video is available on YouTube here.

You may wish to initially record trapping/vaccination information in a note book and enter into the form or app at a later date. However, if you are doing this make sure that you collect all the information required otherwise there may be missing fields.

Other forms used to record vaccination activities are listed below:

- VF6 BCG Vaccine/Diluent Tracking Form: This form is used if a box of vaccine doses is taken out of the central vaccine fridge, several are used in the field (using a portable fridge) and then the remaining doses are returned back to the central fridge. In this case the details of the vaccine batch need to be recorded along with the relevant dates and timings.
- VF9 Portable Refrigerator Temperature Record Chart: While using a portable fridge in the field it is good practice to regularly record the temperature to be sure the vaccine stays within the specified range (2-8^{0}C).
- VF10 Reporting form for adverse events: This form is used in the very unlikely event that a vaccinated badger has an adverse reaction to the vaccine.

Submitting your records

If you are using the VF3 form rather than the app you are required to regularly submit your data using the returns spreadsheet to DEFRA at badger.vaccination@defra.gov.uk, or by uploading to the TrAPP system at wvsapp.org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