



# **Bovine Tuberculosis (bTB)**

Consultation on Potential Wildlife Intervention Options as part of the Bovine Tuberculosis in Northern Ireland: Blueprint for Eradication



Department of  
**Agriculture, Environment  
and Rural Affairs**  
[www.daera-ni.gov.uk](http://www.daera-ni.gov.uk)

An Roinn  
**Talmhaíochta, Comhshaoil  
agus Gnóthaí Tuaithe**

Depairtment o'  
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TBBR Policy Team

Animal Health & Welfare Division

Department of Agriculture, Environment and Rural Affairs Jubilee House

111 Ballykelly Road Ballykelly Limavady

BT49 9HP

Email:

TBBR.Policybranch@daera-ni.gov.uk

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## Glossary of Terms

The following abbreviations are used throughout this consultation document:

| Abbreviation | Meaning                                                              |
|--------------|----------------------------------------------------------------------|
| BCG          | Bacillus Calmette–Guérin (vaccine for tuberculosis)                  |
| bTB          | Bovine Tuberculosis                                                  |
| CITT         | Comparative Intradermal Tuberculin Test                              |
| CVO          | Chief Veterinary Officer                                             |
| DAERA        | Department of Agriculture, Environment and Rural Affairs             |
| DAFM         | Department of Agriculture, Food and the Marine (Republic of Ireland) |
| DEFRA        | Department for Environment, Food and Rural Affairs (England)         |
| DPP          | Dual Path Platform (diagnostic test)                                 |
| EU           | European Union                                                       |
| GB           | Great Britain                                                        |
| HRA          | Habitats Regulations Assessment                                      |
| M. bovis     | Mycobacterium bovis (causative agent of bovine tuberculosis)         |
| NGTS         | Next Generation Text Service                                         |
| NI           | Northern Ireland                                                     |
| RBCT         | Randomised Badger Culling Trial                                      |
| RoI          | Republic of Ireland                                                  |
| SEA          | Strategic Environmental Assessment                                   |
| TBPSG        | TB Partnership Steering Group                                        |
| TBSPG        | TB Strategic Partnership Group                                       |
| TVR          | Test and Vaccinate or Remove                                         |

In the context of badger intervention:

- **Proactive** means carrying out badger intervention across the entirety of a bTB hotspot area, not just around farms with herd breakdowns.
- **Reactive** means carrying out badger intervention in a localised area around farms with herd breakdowns.

- **Non-selective** means the removal of badgers regardless of their disease status, i.e. A “cull” intervention is non-selective as all badgers found are removed.
- **Selective** means the removal of badgers based on their disease status. i.e. the Test and Vaccinate or Remove (TVR) intervention is selective as only test-positive badgers are removed.

## Foreword by Minister:

Bovine tuberculosis (bTB) remains one of the most significant animal health challenges facing Northern Ireland (NI). It places a heavy burden on our farming community both from a financial and well-being perspective. It negatively impacts our efforts to build a more sustainable agri-food sector and causes ongoing pressures on government finances. We must do more if we are to achieve sustained disease control and move towards eventual eradication.

A key element of this challenge is the role of wildlife in the transmission of bTB. Addressing this issue is complex. It requires careful consideration of the scientific evidence, implementation practicalities, experience from other jurisdictions, financial impact and views by way of consultation. As Minister, I have consistently emphasised that decisions in this area must be based on robust science and sound evidence. This consultation reflects that commitment.

There is no single solution to bTB. International experience demonstrates that effective control requires a comprehensive approach, combining strong on-farm biosecurity, effective cattle controls, and, where supported by evidence, appropriate wildlife interventions.

This consultation is focused on exploring wildlife intervention options in the specific context of bTB control. It seeks to draw on the best available scientific research and evidence. It also reflects the importance of transparency and engagement. Decisions of this nature must command public confidence. That can only be achieved by setting out the evidence clearly, examining the options openly, and listening carefully to all views. Farmers, veterinarians, industry organisations, veterinary bodies, environmental organisations, scientists, conservationists and the wider public all have valuable perspectives to contribute.

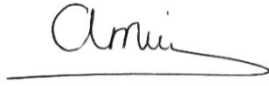
The questions posed, and views sought, in this document are not about predetermined outcomes. Rather, they are intended to inform a careful and balanced assessment of what could work, what is practical, and what is achievable in the NI context to address the role of wildlife. This includes consideration of the evidence for effectiveness, cost, welfare, environmental impact and deliverability.

Ultimately, our objective is to reduce bTB levels in a way that is sustainable, evidence-based and aligned with our wider commitments as outlined in the Bovine Tuberculosis in Northern Ireland: Blueprint for Eradication. This will not be straightforward, and it will require difficult decisions. However, by grounding those decisions in science and



evidence, and by working collaboratively with all interested parties, we can make meaningful progress.

I encourage all those with an interest in this issue to engage constructively with this consultation. Your input will play an essential role in shaping my decisions on next steps and the future direction of the bTB Programme in NI.

A handwritten signature in black ink, appearing to read 'A. Muir', with a long horizontal stroke extending to the right.

**Andrew Muir MLA**

Minister of Agriculture, Environment and Rural Affairs

## Consultation at a Glance

This consultation seeks views on proposed wildlife intervention options as part of the **Bovine Tuberculosis (bTB) in Northern Ireland: Blueprint for Eradication** (“the Blueprint”).

It also seeks views on the Blueprint itself and on extending the licensing of lay vaccination of badgers to NI.

The consultation will open on Friday 3<sup>rd</sup> July 2026 and close at 5:00pm on Friday 25<sup>th</sup> September 2026.

### What we are consulting on

The Department is seeking views on the following matters:

1. The wildlife intervention approach to be taken forward as part of the Blueprint, including the relative merits of:
  - non-selective culling;
  - Test and Vaccinate or Remove (TVR) which is a selective culling approach; and
  - vaccination only approaches.
2. The deployment method(s) that should be permitted for any wildlife intervention, including:
  - controlled shooting of free-roaming badgers (non-selective culling only);
  - cage trapping; and
  - stopped restraints.
3. The delivery and funding of any wildlife intervention by private industry.
4. **Views on the Blueprint as a whole**, including its overall approach and proposed framework.
5. **Whether NI should enable licensed lay vaccinators**, operating under veterinary direction, to vaccinate badgers against bovine tuberculosis.

To note, that when responding to questions on wildlife intervention options and delivery methods in particular, respondents are invited to select the extent to which they support or oppose each option.

### What we are not consulting on

This consultation does not seek views on individual cattle measures, individual people-related measures, or decisions relating to compensation.

## What happens next

Responses received through this consultation will be analysed and will inform the Minister of Agriculture, Environment and Rural Affairs' consideration of the most appropriate way forward on wildlife intervention, any revised updates to the current Blueprint, and on the introduction of lay vaccination of badgers against bTB to NI.

## How we will use your responses

All consultation responses will be analysed in line with established consultation practice. A summary of responses will be prepared and published on the Department's website.

The responses, alongside the findings of the accompanying impact assessments and environmental assessments, will be presented to the Minister for his consideration on the way forward on wildlife intervention; any revisions which may be required to the current Blueprint; and on the introduction of lay vaccination of badgers against bTB in NI.

### 1.1 Consultation Details

While bovine tuberculosis (bTB) is driven by several sources of infection, scientific evidence shows that badgers can act as a wildlife reservoir of *Mycobacterium bovis* (*M. bovis*) and contribute to ongoing disease persistence and transmission to cattle in NI. Although infection may occur in other wildlife also, the badger is the predominant wildlife source associated with transmission risk to cattle. To make meaningful progress in reducing disease levels, it is necessary to consider how best to address this aspect of bTB maintenance and spread alongside disease control measures focused on cattle and herd management.

This consultation is seeking views on potential options to deal with the role of badgers in the maintenance and spread of bTB, known as *wildlife intervention options*.

The purpose of this consultation is for stakeholders to understand the **potential range of options and delivery approaches** being considered and provide feedback on what could be taken forward. No single preferred option has been identified at this stage, which will be for the Minister to determine once the consultation process is complete.

We are also seeking views on the TB Partnership Steering Group's Blueprint for Eradication, which serves as the guiding document for future policies to be progressed within the Northern Ireland (NI) TB Eradication Programme, and also on extending the licensing of lay vaccination to NI – that being vaccination of badgers against bTB by a trained lay person rather than an official veterinarian.

## 1.2 Potential Wildlife Intervention Options, Deployment Methods and on the ground Delivery Approaches

In this consultation we are asking for your views on a range of potential intervention options for addressing the role that badgers play in the maintenance and spread of bTB.

These potential interventions – Non-selective culling, Test and Vaccinate or Remove (TVR), or Vaccination only – would be used in a targeted way, in areas of at least 100km<sup>2</sup>, with factors taken into consideration including long-term high levels of bTB in cattle herds, higher than average badger social group density, evidence of bTB infection within the badger population in the area, local veterinary and epidemiological information and natural boundaries, where available.

The consultation will pose questions concerning:

- The potential wildlife intervention options available.
- Methods for deploying these interventions.
- Funding approaches for their implementation.
- Delivery approaches.

## 1.3 The Blueprint

The Blueprint<sup>1</sup> was agreed by the TB Partnership Steering Group,<sup>2</sup> endorsed by the DAERA Minister, and published in April 2025. It sets out the Department's strategic direction towards bTB eradication in NI and contains 34 measures detailing actions for further development to tackle bTB and its spread. Many of its recommendations are ongoing, subject to enhancements, or require further policy development. Some may require further public consultations to take place. It is a continually evolving document and we are taking this opportunity to ask for stakeholders' views on our strategic approach to fighting this disease.

## 1.4 Lay Vaccinators

The Department will also be seeking views on the extension to NI of legislation currently operable in Great Britain which would allow for the licensing of trained lay vaccinators to vaccinate badgers against bTB. This would help expand future operational capacity and support long-term disease control efforts.

## 1.5 Legislation and Regulatory considerations

A key element in the implementation of any wildlife intervention approach within bTB control is the legislative framework under which it would operate. At present, there is no primary or secondary legislation in force in NI which explicitly provides for measures relating to badgers for the purpose of addressing bTB disease levels and transmission.

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<sup>1</sup> Bovine Tuberculosis in Northern Ireland: Blueprint for Eradication (The Blueprint): <https://www.daera-ni.gov.uk/sites/default/files/2025-04/Bovine%20TB%20in%20NI%20Blueprint%20for%20Eradication%20final.pdf>

<sup>2</sup> TB Partnership Steering Group – Bovine TB in Northern Ireland: Blueprint for Eradication: <https://www.daera-ni.gov.uk/publications/tb-partnership-steering-group-bovine-tb-northern-ireland-blueprint-eradication>

The Department has considered the potential use of existing powers under Article 18 of the Wildlife (NI) Order 1985 and Article 13 of the Diseases of Animals (NI) Order 1981. However, while these offer a possible route to implementing any chosen wildlife option, at this juncture, the Department believes that these provisions may not provide a sufficiently clear or comprehensive legislative basis for the implementation of a sustained wildlife intervention programme of the types being consulted upon.

In light of this, the Department currently considers that a more specific legislative framework will likely be required.

Subject to the outcome of this consultation, and any subsequent Ministerial decision, it is envisaged that any decision to progress wildlife intervention will be facilitated by either amendments to existing primary legislation or the development of new primary legislation to support the implementation of any preferred approach.

## 1.6 Impact Assessments

Screening of equality and rural needs considerations has been carried out for the Blueprint and in particular the potential wildlife intervention options being consulted upon, as well as the introduction of licenced lay vaccinators to NI.

The screening documents are available on the Department's website as part of this consultation exercise. The Department welcomes views on these screening exercises as part of this consultation process.

Full assessments may be undertaken following this consultation exercise.

### 1.6.1 Equality Considerations

An Equality and Disabilities Screening Template has been completed for the Blueprint, in particular the potential wildlife intervention options, as well as the introduction of licenced lay vaccinators to NI.

It has demonstrated that there will not be a differential impact because of an individual's religious belief, national identity, racial group, age, marital status, sexual orientation, gender, disability or whether or not he/she has dependents. Therefore, the Department considers that the consultation has been screened out from a full Equality Impact Assessment.

A copy of this screening document can be found at **Annex I** for your consideration.

**Question:**

**Q1. Are there any comments on equality or disability issues you wish to raise?**

☐ Yes    ☐ No

Do you have any evidence that would be useful to the Department?

If so, can you describe the evidence and provide a copy to:

[TB.Consultation@daera-ni.gov.uk](mailto:TB.Consultation@daera-ni.gov.uk)

### 1.6.2 Rural Needs Consideration

The Department has a statutory duty to implement the requirements of the Rural Needs Act. A Rural Needs Impact Assessment has been carried out and determined that no further action is required at this stage to address rural issues. It is published alongside this document on the DAERA website.

A copy of the Rural Needs Impact Assessment can be found at **Annex II** for your consideration.

**Question:**

**Q2. Are there any comments on the social and economic needs of persons in rural areas that you wish to raise?**

☐ Yes    ☐ No

Do you have any evidence that would be useful to the Department?

If so, can you describe the evidence and provide a copy to:

[TB.Consultation@daera-ni.gov.uk](mailto:TB.Consultation@daera-ni.gov.uk)

### 1.6.3 Habitat Regulations Assessment (HRA)

A Habitats Regulations Assessment (HRA) is a formalised process of identifying and evaluating impacts of proposed plans or projects on sites designated for protection, conservation or restoration.

The Department engaged with an external contractor to carry out a HRA on the potential wildlife intervention options for all relevant protected sites within NI.

The HRA assessed the impact pathways associated with the potential wildlife options and their potential effects on habitat sites within NI.

It concluded that given its high-level strategic nature, the potential wildlife options would not result in a likely significant effect on any habitat sites, either alone or in combination with other plans or projects.

A copy of the Habitats Regulations Assessment can be found at **Annex III** for your consideration.

#### Question:

**Q3. Are there any comments that you wish to raise regarding the HRA Report?**

☐ Yes    ☐ No

Do you have any environmental evidence that would be useful to the Department

If so, can you describe the evidence and provide a copy to:

[TB.Consultation@daera-ni.gov.uk](mailto:TB.Consultation@daera-ni.gov.uk)

### 1.6.4 Strategic Environmental Assessment (SEA)

The Department has engaged an external contractor to complete an SEA.

The Department has now considered the initial findings of the SEA and the assessment outcomes on the Blueprint, as well as any specific mitigation measures.

These have helped shape the measures included in this consultation paper.

An Environmental Report has been produced as part of the SEA, and it is published alongside this document on the DAERA website.

A copy of the assessment can be found at **Annex IV** for your consideration.

Question:

Q4. Are there any comments that you wish to raise regarding the SEA Report?

☐ Yes    ☐ No

Do you have any environmental evidence that would be useful to the Department

If so, can you describe the evidence and provide a copy to:

[TB.Consultation@daera-ni.gov.uk](mailto:TB.Consultation@daera-ni.gov.uk)

## 1.7 Who would we like to hear from?

We want to ensure that any future policy is effective, transparent, and considerate of a range of information sources including scientific evidence, and both public and stakeholder views. We are therefore inviting feedback before final decisions are made.

Anyone may reply to this consultation. The Department would particularly like to hear from: cattle/livestock keepers; landowners as well as land users; cattle/livestock associations; conservationists; environmentalists; those with an interest in wildlife intervention as part of bTB control; veterinary surgeons/associations; agricultural markets, auctioneers; and anyone else with an interest in bTB control and eradication in NI.

## Chapter 2: Introduction

Bovine TB, caused by *M. bovis*, remains one of the most challenging and costly endemic animal diseases facing governments across NI, Great Britain (GB) and the Republic of Ireland (RoI).

It is a complex, multi-host infection involving cattle, wildlife, particularly badgers, and the wider environment, and its persistence continues to have significant financial, operational, and emotional consequences for farmers and the agri-food sector.

The disease is difficult to detect as the available diagnostic tests are imperfect, and it can survive in the environment for several months. In cattle, it is mainly a respiratory disease, but clinical signs are rare due to the testing programme and the removal of animals.

A programme to eradicate bTB has been in place in NI since the late 1950s. The current bTB programme, which is required under European law, underpins the ability of NI's livestock sectors to trade with the EU and internationally. It is essential to ensure the bTB programme remains affordable and continues to be able to support the NI cattle industry. Trade in bovine products is valued at approaching £3 billion (£1,697million beef/sheep and £1,277million milk products).<sup>3</sup>

The programme is based upon four key pillars:

1. Detection and removal of infected animals through routine annual testing with the comparative intradermal tuberculin test (CITT; 'the skin test').
2. Abattoir surveillance.
3. Application of movement restrictions on infected herds, and further testing to enable further identification and removal of infected animals to limit onward spread of infection.
4. Epidemiological investigation and supplementary testing for herds and individual animals considered at risk to bTB herd breakdowns.

Due to the current programme of bTB testing and because of pasteurisation of milk and meat inspection, bTB is no longer a significant human health problem in the UK.

However, a risk does remain particularly for those working closely with cattle or from drinking unpasteurised milk. Control and eradication of the disease is one of the most pressing domestic animal health problems in NI with a significant number of herds affected. The cost and scale of the disease make it one of the leading challenges that the NI cattle and agriculture industry faces.

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<sup>3</sup> Northern Ireland Food and Drinks Processing Report: <https://www.daera-ni.gov.uk/sites/default/files/2026-03/Northern%20Ireland%20Food%20and%20Drink%20Processing%20Report%202022.pdf>

## 2.1 Current Disease Picture in Northern Ireland

Current levels of bTB disease in NI for the 12-month period up to April 2026 show bTB herd incidence at 9.78% and confirmed herd prevalence up to December 2025 at 14.05%.

Financially, the impact is severe and sustained. In 2025/26, the total Departmental bTB programme expenditure is expected to exceed £70million, with £54 million paid directly in compensation. Over the past two decades, bTB has cost the NI public purse an estimated £750 million, and based on current disease trajectories, projections indicate that programme costs may exceed £1billion over the next 15 years. A recently published industry report has calculated the indirect annual cost of bTB to farmers at over £96 million.<sup>4</sup>

Beyond economics, bTB causes a profound emotional and psychological toll. Herd breakdowns disrupt business continuity, restrict cattle movements, jeopardise breeding decisions, impact productivity and create personal strain and stress on the farming community.

## 2.2 DAERA Bovine Tuberculosis Policy Development

In March 2022, the Department of Agriculture, Environment and Rural Affairs (the Department) launched the *Bovine Tuberculosis (bTB) Eradication Strategy for Northern Ireland*<sup>5</sup> aiming to address all major drivers of disease persistence and transmission - including the wildlife reservoir – through a holistic, evidence-led, long term eradication plan.

The Strategy reflected earlier work, published in 2016, by an independent expert advisory body - the TB Strategic Partnership Group (TBSPG).<sup>6</sup> It was also the result of feedback from extensive public consultations from 2017/18<sup>7</sup> and 2021.<sup>8</sup>

A key component of the 2022 bTB Eradication Strategy was a programme of badger intervention in areas of high badger density and high incidence of bTB herd breakdowns. This was to address the role of the badger population in the maintenance and spread of the disease.

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<sup>4</sup> Review of the indirect costs borne by farmers, as a result of bovine TB: <https://theandersonscentre.co.uk/northern-ireland-bovine-tb-btb-study-press-release/>

<sup>5</sup> 2022 Bovine Tuberculosis (bTB) Eradication Strategy for Northern Ireland: <https://www.daera-ni.gov.uk/sites/default/files/publications/daera/21.22.237%20Bovine%20TB%20Eradication%20Strategy%20for%20NI%20Final%20V5.PDF>

<sup>6</sup> TB Strategic Partnership Steering Group: <https://www.daera-ni.gov.uk/news/mcilveen-determined-her-efforts-eradicate-bovine-tb-northern-ireland>

<sup>7</sup> 2017 Consultation: <https://www.daera-ni.gov.uk/consultations/bovine-tuberculosis-eradication-strategy-northern-ireland>

<sup>8</sup> 2021 Consultation: <https://www.daera-ni.gov.uk/consultations/consultation-departments-proposed-implementation-and-next-steps-btb-eradication-strategy-northern-ireland>

At that time the Department's recommended wildlife intervention option was a proactive non-selective culling of badgers in the intervention area for a period of 7 years (phase 1), followed by vaccination for a period of 8 years (phase 2).

In April 2022, two environmental organisations were successful in taking a judicial review which quashed the proposed policy of a non-selective cull of badgers via controlled shooting of free-roaming badgers.<sup>9</sup> The judgment further ruled that the Department must undertake a new public consultation before progressing any further wildlife intervention measures.

Following the judicial review, and in response to the continuing high levels of bTB and its impact on farmers, industry and the public purse, the Minister of Agriculture, Environment and Rural Affairs, Andrew Muir MLA, upon taking up post in February 2024, asked the NI Chief Veterinary Officer (CVO) to carry out a review of bTB in NI.

## 2.3 Northern Ireland Chief Veterinary Officer Review

The CVO undertook a review of the Department's approach to the control and eradication of bTB resulting in his report, the *Chief Veterinary Officer - Review of Bovine Tuberculosis in Northern Ireland* being published in November 2024.<sup>10</sup>

It was developed following consultation with a diverse range of stakeholders and experts, and the review provides an overarching analysis of the bTB situation in NI. It outlines measures, which, if implemented holistically, could lead to the reduction and eventual eradication of bTB in NI.

One proposal within the Review was the establishment of a stakeholder body to facilitate stakeholder and government collaboration toward eradication. The Minister accepted this proposal and in January 2025 the TB Partnership Steering Group (TBPSG) was established. The group is comprised of members from key stakeholders across the farming industry, veterinary and environmental organisations. Its first task was consideration of the CVO review and the development of a plan for the control and eradication of bTB.

## 2.4 Bovine Tuberculosis in Northern Ireland: Blueprint for Eradication 2025 (“the Blueprint”).

The TBPSG published the *Bovine Tuberculosis in Northern Ireland: Blueprint for Eradication* (the Blueprint) in April 2025.<sup>11</sup> The Blueprint builds upon the recommendations within the CVO review and the actions within the 2022 bTB Eradication Strategy for NI.

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<sup>9</sup> Judicial Review: <https://www.judiciaryni.uk/files/judiciaryni/decisions/Northern%20Ireland%20Badger%20Group%20and%20Wild%20Justice%27s%20Application.pdf>

<sup>10</sup> Chief Veterinary Officer Review: <https://www.daera-ni.gov.uk/publications/chief-veterinary-officer-review-bovine-tuberculosis-northern-ireland-november-2024>

<sup>11</sup> Bovine Tuberculosis in Northern Ireland: Blueprint for Eradication (The Blueprint): <https://www.daera-ni.gov.uk/sites/default/files/2025-04/Bovine%20TB%20in%20NI%20Blueprint%20for%20Eradication%20final.pdf>

The Blueprint sets out the key priorities and actions to be developed further to tackle bTB and identifies those measures where progress must be made in the immediate future across the three pillars of people, cattle and wildlife.

The Blueprint, endorsed by Minister Muir as the Departmental way forward, has categorised wildlife as an immediate priority with stated short-term actions to:

- Bring forward proposals for effective, evidence-based wildlife interventions and put forward TBPSG views for consideration by the Minister;
- Consult on proposals as agreed by the Minister and consider requirements from the Judicial Review decision of October 2023; and
- Following Ministerial consideration, progress any identified necessary legislation.

The Department is therefore seeking your views through this new consultation. As a result of the judicial review decision, the consultation's focus is on potential wildlife intervention options, however, it also welcomes views on the broader Blueprint and the extension of licensed lay vaccination to NI – that being vaccination of badgers against bTB by a trained lay person rather than an official veterinarian.

## Chapter 3: Rationale for Wildlife Intervention as part of the Blueprint for Eradication

In NI, *M. bovis* is well established and maintained within the badger population with the badger being recognised as a reservoir host of the organism.<sup>12 13</sup>

Evidence from other countries that have been successful in, or are making good progress towards, eradicating bTB shows that they have strengthened the measures within their programme over time. This has been to ensure that they address all known risks to bTB persistence and transmission, including those posed by wildlife, e.g. New Zealand.<sup>14</sup>

### 3.1 Background

The Department acknowledges that a wildlife intervention is needed to address the role of the badger population in the maintenance and spread of bTB.

In formulating the potential wildlife intervention options, the Department has thoroughly examined the peer reviewed scientific evidence and the associated costs of deploying various interventions.

Key resources used by the Department in coming to its decision on the rationale for wildlife intervention are published, along with this consultation document, and include:

- TB Strategic Partnership Group's Report (**Annex V**)
- Annotated Scientific Bibliography (**Annex VI**)
- DAERA scientific opinion on peer reviewed evidence on badger intervention in relation to the control of bovine tuberculosis (**Annex VII**)

In addition, to help assess the economic costs of each wildlife intervention approach, the following analyses have been completed:

- bTB Badger Intervention Options Analysis (**Annex VIII**)
- and accompanying Badger Intervention Analysis – calculation assumptions (**Annex IX**)

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<sup>12</sup> Courcier et al (2018) Monitoring *Mycobacterium bovis* in Eurasian badgers (*Meles meles*) killed by vehicles in Northern Ireland between 1998 and 2011: <https://bvajournals.onlinelibrary.wiley.com/doi/full/10.1136/vr.103934>

<sup>13</sup> Griffin et al (2003) The impact of badger removal on the control of tuberculosis in cattle herds in Ireland: <https://www.sciencedirect.com/science/article/pii/S0167587704002090>

<sup>14</sup> Livingstone et al (2015) Development of the New Zealand strategy for local eradication of tuberculosis from wildlife and livestock: <https://www.tandfonline.com/doi/full/10.1080/00480169.2015.1013581>

## TB Strategic Partnership Group Report

In 2016, an independent advisory body, the TB Strategic Partnership Group (TBSPG), was established to develop a long-term strategy for the eradication of bTB in cattle.

The group carried out in-depth research, including preparing a review of the science<sup>15</sup> which was then subjected to scientific peer review by Professor Simon More,<sup>16</sup> and behavioural analysis by Dr Philip Robinson.<sup>17</sup> In developing its recommendations, TBSPG consulted widely, and published its final strategy in December 2016.<sup>18</sup>

That work concluded that an effective means of addressing the risks posed by wildlife, particularly by badgers, would have to form part of the solution if the objective of eradicating the disease is to be achieved in NI. It concluded that a proactive badger cull would be necessary to reduce infection loads in the badger population to pave the way for badger vaccination.

## Annotated Scientific Bibliography

Since this 2016 report and following the judicial review decision, the Department initiated an additional Scientific Review in 2024. As a result of this thorough assessment, an Annotated Bibliography (**Annex VI**) was compiled, updating the Department's repository of scientific papers and relevant data covering the period from 1 Jan 2015 to 30 November 2024.

## DAERA Scientific Opinion on Peer Reviewed Evidence on Badger Intervention in relation to the control of Bovine Tuberculosis

Utilising the newly updated bank of information, and building upon an earlier version, the Department produced the DAERA scientific opinion on peer reviewed evidence on badger intervention in relation to the control of bovine tuberculosis 2025 (**Annex VII**).

This paper provides the Department's opinion that wildlife intervention is necessary to disrupt the cycle of infection between cattle and badgers, thereby supporting the overall goal of disease control and eventual eradication. Its review of the evidence concluded that the wildlife interventions which could potentially be effectively deployed in NI

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<sup>15</sup> Review of Science and Epidemiology: <https://niopa.qub.ac.uk/server/api/core/bitstreams/957d5b67-66be-4e48-a744-125242a7a169/content>

<sup>16</sup> Peer Review of Scientific appraisal by Prof. Simon

More: <https://www.northernireland.gov.uk/sites/default/files/publications/daera/peer-review-of-scientific-appraisal-by-simon-more-additional-comments.PDF>

<sup>17</sup> Behavioural Appraisal of the Recommendations of the TB Strategic Partnership

Group: <https://niopa.qub.ac.uk/server/api/core/bitstreams/31690014-b297-4445-aa35-707af31b91fc/content>

<sup>18</sup> TBSPG Bovine Tuberculosis Eradication Strategy for Northern Ireland: <https://www.daera-ni.gov.uk/sites/default/files/publications/daera/bovine-tuberculosis-eradication-strategy.pdf>

included non-selective culling, TVR, vaccination only and, theoretically a hybrid model which would combine a two or more of the options outlined.

## bTB Badger Intervention Options Analysis

The bTB Badger Intervention Options Analysis (**Annex VIII**) identifies a shortlist of feasible badger intervention options and considers their preliminary (i.e. pre-stakeholder engagement) relative rank having taken into account their estimated cost, their potential for benefit generation, relevant non-monetary factors (for which an evidence base is available), and risks. This does not represent a final decision by the Department or a preferred option but, rather, is a ranking of options based on the requirements and underpinning evidence in the Options Analysis to help inform responses to this consultation and future Ministerial decision making.

These are all factors that affect the overall potential of an option to deliver value for money. The analysis is underpinned by a set of assumptions (see the accompanying “assumptions” paper at **Annex IX**).

## bTB Analyses – Calculation Assumptions

The “bTB analyses – calculation assumptions” (**Annex IX**) outlines the assumptions underpinning two aspects of the bTB Badger Intervention Options Analysis, i.e. (i) the calculation of estimated economic cost of each shortlisted badger intervention option; and (ii) of the value of a herd breakdown avoided. The latter is used in the Options Analysis to estimate the number of herd breakdowns that would need to be avoided before the benefits of each option would offset its cost.

## 3.2 Additional Considerations

When considering where a wildlife intervention may take place, the Department may also take into account the DAERA Road Traffic Accident Survey, which provides an indication of the presence of *M. bovis* infection in badger populations. It also, when considering the potential scale and extent of any intervention, has to take into consideration the relevant legal and environmental constraints arising from the Bern Convention.

### Road Traffic Accident Survey

The DAERA road traffic accident survey carries out postmortems on collected badger carcasses. From the postmortem results *M. bovis* infection is known to be present in approximately 20% of those badgers collected. Strain types in badgers are similar to those identified in the local cattle population.<sup>19</sup> Prevalence levels in badgers are positively associated with the local bTB prevalence in cattle.<sup>20</sup>

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<sup>19</sup> Genomic epidemiology of *Mycobacterium bovis* infection in sympatric badger and cattle populations in Northern Ireland: <https://pmc.ncbi.nlm.nih.gov/articles/PMC10272874/>

<sup>20</sup> Courcier et al (2018) Monitoring *Mycobacterium bovis* in Eurasian badgers (*Meles meles*) killed by vehicles in Northern Ireland between 1998 and 2011: <https://bvajournals.onlinelibrary.wiley.com/doi/abs/10.1136/vr.103934>

In 2025 badger *M. bovis* prevalence is estimated at 22.7% (95% Confidence Interval 18.3% - 27.6%).

## Bern Convention

Badgers are a protected species under the Convention on the Conservation of European Wildlife and Natural Habitats (the “Bern Convention”),<sup>21</sup> which is an international treaty to which the United Kingdom is a Contracting Party, and which is given effect in NI primarily through the Wildlife (NI) Order 1985.

While activities capable of causing local disappearance of, or serious disturbance to, populations of badgers are prohibited, Article 9 of the Convention allows exceptions ‘to prevent serious damage to crops, livestock, forests, fisheries, water and other forms of property’; ‘in the interests of public health’ and ‘overriding public interest’ provided that there is ‘no other satisfactory solution and that the exception will not be detrimental to the population concerned’.

In any event the total area over which intervention would take place would not conflict with the protection afforded to protected species under the Bern Convention. In brief, the total intervention area would not at any one time exceed 30% of the total agricultural land area in NI.

## 3.3 Potential Wildlife Intervention Options

Taking the above information into account, the Department has identified three potential wildlife intervention options which are considered both available and viable for addressing the maintenance and spread of bTB by wildlife, specifically badgers, as part of the broader strategy to eradicate bTB from NI.

The three options are:

- Non-Selective Cull
- Test and Vaccinate or Remove (TVR) – a selective culling approach.
- Vaccination Only

This consultation aims to gather feedback to help the Minister make an informed decision on which wildlife intervention(s) should progress as part of a wider approach to advance the bTB eradication strategy.

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<sup>21</sup> Convention on the Conservation of European Wildlife and Natural Habitats: <https://rm.coe.int/1680078aff>

**Question:**

**Q5. Do you agree with the Department that a wildlife intervention is necessary in Northern Ireland?**

☐ Yes      ☐ No

**Question:**

**Q6. Based on the scientific evidence that has been provided in Annexes V to VII is there any additional scientific evidence the Department should also consider?**

☐ Yes      ☐ No

## Chapter 4: Timing, Scale and Application of Wildlife Interventions

This chapter sets out the proposed framework for the timing, scale and geographical application of the potential wildlife intervention options under consultation, as part of NI's bTB Eradication Programme.

This is irrespective of whichever option(s) may ultimately be taken forward.

The operational structure detailed below has been developed from the scientific papers and evidence detailed in [Chapter 3](#), and in **Annexes I-VII** which include the science and evidence rationale, and environmental and other impact assessments. It explains the rationale for the duration of interventions, the criteria for selecting and defining intervention areas, and the seasonal windows within which activities may take place.

All the wildlife intervention options described in this chapter (and throughout the consultation) are intended to operate alongside cattle-based controls as part of the existing NI bTB programme and new cattle and people measures implemented as part of the *Bovine TB in Northern Ireland: Blueprint for Eradication*.<sup>22</sup>

All of these options are intended to support a proportionate, evidence-led and adaptable approach to bTB eradication in NI.

### 4.1 How Areas Will Be Chosen and Length of Intervention

Areas may be selected for wildlife intervention where there is evidence that badgers are contributing to ongoing bTB problems in cattle. Factors that will be taken into consideration include:

- Long-term high levels of bTB in cattle herds.
- Higher than average badger social group density.
- Evidence of bTB infection in local badgers.
- Local veterinary and epidemiological information.
- Natural or physical boundaries that limit badger movement, such as rivers or major roads where available.

### 4.2 Selection and Scale of intervention Area

The precise size and configuration of each intervention area which would be subject to one or more of the wildlife intervention options under consultation in this document, if chosen, will depend on local conditions.

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<sup>22</sup> TB Partnership Steering Group - Bovine TB in Northern Ireland: Blueprint for Eradication | Department of Agriculture, Environment and Rural Affairs: <https://www.daera-ni.gov.uk/sites/default/files/202504/Bovine%20TB%20in%20NI%20Blueprint%20for%20Eradication%20final.pdf>

Each area will be at least 100km<sup>2</sup> and where possible, natural or physical boundaries, such as rivers or major roads, will be used to help define areas and limit badger movement beyond these boundaries.

The total area over which wildlife intervention would take place would not conflict with the protection afforded to protected species under the Bern Convention. Therefore, the total intervention area would not at any one time exceed 30% of the total agricultural land area in NI.

### 4.3 Intervention Period

The intervention period is proposed to be up to five years.

This duration is based on evidence from previous trials (TVR)<sup>23</sup> and modelling,<sup>24</sup> and experience from other countries, where standard interventions are generally expected to be of at least five years' duration to achieve disease control outcomes; however, the intervention will be kept under close continuous review once an intervention commences.

Following this five-year period, any future approach would be informed by surveillance data, disease trends and emerging scientific evidence which the Department would consider at that time.

### 4.4 Intervention Window

Having set out how long wildlife interventions may operate and where they may be applied, this section describes when interventions can take place throughout the year.

The 'intervention window' refers to the exact period each year during which activities such as trapping, vaccination, or culling are permitted. These 'windows' vary between jurisdictions.

#### **Northern Ireland**

In NI, the existing intervention window (or open season) is determined by the Department and runs from 1 July to 30 November. It has been in place for over 30 years.

The start date of 1 July is based on evidence that sows tend to give birth from mid-January to mid-March, with a weaning period of around 12 weeks. The end date of 30 November is intended to prevent disturbance to pregnant sows from December onwards.

Future consideration may be given to extending the open season as this would be potentially beneficial regardless of the wildlife intervention option (s) chosen. This is because the wider the intervention window, the greater the likelihood that animals will be captured or removed.

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<sup>23</sup> Menzies et al (2021) Test and vaccinate or remove: Methodology and preliminary results from a badger intervention research project: <https://bvajournals.onlinelibrary.wiley.com/doi/full/10.1002/vetr.248>

<sup>24</sup> A simulation model to support a study of test and vaccinate or remove (TVR) in Northern Ireland: <https://www.daera-ni.gov.uk/sites/default/files/publications/dard/fera-tvr-modelling-report.pdf>

This would increase the rate by which the overall badger infection load in an area is reduced. Any consideration to extend the intervention window will be assessed against the potential welfare implications and the value linked to the type of intervention.

### Republic of Ireland

In the RoI, a badger intervention window only applies to a new area. Intervention is permitted all year round in areas where an intervention has previously taken place.

|                                                     |                       |
|-----------------------------------------------------|-----------------------|
| • New Intervention Area, Stopped Restraints         | 1 April to 31 January |
| • Established Intervention Area, Stopped Restraints | All year              |

### England

England has different intervention windows depending on the nature of the intervention and type of capture method deployed.

These are:

|                                                |                       |
|------------------------------------------------|-----------------------|
| • Cage trapping and shooting                   | 1 June to 30 November |
| • Controlled shooting                          | 1 June to 31 January  |
| • Cage trapping for the purpose of vaccination | 1 May to 30 November  |

## Wildlife Intervention options

The purpose of the following Chapters 5 through to 8 is to now describe the wildlife intervention options being consulted on including delivery methods and associated evidence to support informed consultation responses.

The inclusion of scientific evidence, cost estimates, welfare considerations and experience from other jurisdictions is included under each chapter and is intended to explain, and provide context, on how each option may operate in practice.

This material should not be read as an indication of a preferred option. No option is presented as recommended or pre-selected.

When responding to questions on wildlife intervention options and delivery methods, respondents are invited to select the extent to which they support or oppose each option.

The Department has not reached a view on which, if any, wildlife intervention option should be taken forward. Responses to this consultation will help inform Ministerial consideration.

## Chapter 5: Introduction to Wildlife intervention Options and Delivery Methods

### 5.1 Overview

This section provides an overview of the wildlife intervention options (Non-Selective Culling, Test and Vaccinate or Remove (TVR), and Vaccination Only) and deployment methods (Controlled shooting of free-roaming badgers, Cage Trapping and Stopped Restraints) which are being considered as part of this consultation.

This content is intended to inform responses to the consultation and does not indicate any preferred or recommended option.

Following consideration of the consultation responses, the Minister may choose one or more intervention methods, and one or more options for badger capture, as suitable for deployment in combination across NI. If more than one wildlife intervention option alongside one or more options for capturing badgers is agreed to, the Department may then develop an adaptable approach to the deployment of such methods, based on the disease picture in the area.

### 5.2 Non-Selective Cull

The objective of a non-selective cull is to reduce the infection burden within the badger population and, in turn, to reduce the transmission risk, subject to delivery, coverage and local epidemiology, within an identified intervention area of at least 100km<sup>2</sup>.

This approach seeks to achieve that objective by decreasing the badger population by up to 70%, regardless of an individual badger's infection status.

Non-selective culling has never taken place in NI but has been deployed in both England and the RoI.

There are three primary methods for deploying a non-selective cull: controlled shooting of free-roaming badgers, controlled shooting of cage trapped badgers and controlled shooting of stopped restraint captured badgers.

### 5.3 Test and Vaccinate or Remove (TVR)

The Test and Vaccinate or Remove (TVR) methodology combines field trapping, real-time diagnostic testing at trap site, and vaccination - administering a BCG (Bacillus Calmette-Guérin) vaccine or selective removal of badgers within an identified intervention area of at least 100km<sup>2</sup>.

This is a selective approach to culling in which badgers are captured, anaesthetised and tested for infection using a trap side test, the Dual Path Platform (DPP) test.

Badgers that test negative for bTB are vaccinated, micro-chipped and released, while those that test positive for bTB are euthanised humanely by lethal injection. While

trapping can be carried out by trained lay operatives, the anaesthesia, testing and subsequent vaccination or removal must be carried out by veterinarians.

This process will be repeated annually and badgers that are captured in subsequent years and who test negative again will be revaccinated.

TVR was the subject of a DAERA research project in County Down from 2014-2018.<sup>25</sup>

There are two primary methods for deploying a TVR intervention: cage trapping, and the use of stopped restraints.

## 5.4 Vaccination Only

Vaccination only involves administering a BCG (Bacillus Calmette-Guérin) vaccine to badgers without any prior testing taking place within an identified intervention area of at least 100km<sup>2</sup>.

There is no removal of any infected animals within the local badger population.

Required vaccine coverage to achieve badger herd immunity is dependent on underlying badger bTB prevalence in the area.

A vaccination only approach would not protect already infected animals. It is estimated in some modelling studies that around 30-40% of the badger population, would need to be vaccinated each year to achieve badger herd immunity, but this outcome was predicated on a programme of culling that had reduced badger bTB prevalence.<sup>26 27</sup>

Available evidence therefore indicates that a vaccination only approach may need to be sustained over a prolonged period and delivered at high coverage to achieve its intended effect.<sup>28</sup>

England and the RoI both initiated their badger interventions using culling-based approaches. After pursuing culling methods for many years, England has moved to a vaccination only policy with the RoI also deploying badger vaccination, although it continues to cull where it believes necessary, based on epidemiological evidence.

There are two primary methods for deploying vaccination only: cage trapping, and the use of stopped restraints.

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<sup>25</sup> Arnold et al (2021) A Bayesian analysis of a Test and Vaccinate or Remove study to control bovine tuberculosis in badgers (*Meles meles*): <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0246141>

<sup>26</sup> Smith et al (2018) Modelling as a Decision Support Tool for Bovine TB Control Programs in Wildlife: <https://pmc.ncbi.nlm.nih.gov/articles/PMC6232866/>

<sup>27</sup> Robertson et al (2025) Can Badger Vaccination Contribute to bovine TB Control? A Narrative review of the evidence: <https://www.sciencedirect.com/science/article/pii/S0167587725000492>

<sup>28</sup> Wilkinson et al (2004) A Model of bovine tuberculosis in the badger *Meles meles*: an evaluation of different vaccination strategies: <https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/j.0021-8901.2004.00898.x>

## 5.5 Overview of Deployment / Capture Methods Being Consulted Upon

All badger interventions require live capture, except for controlled shooting of free-roaming badgers (although this method can be supplemented by live capture trapping where necessitated by the terrain).

This section summarises the three deployment/capture methods under consideration for wildlife intervention: controlled shooting of free-roaming badgers (non-selective culling only); the use of cage traps, and the use of stopped restraints (applicable to any intervention).

### 5.5.1 Controlled Shooting of Free-Roaming Badgers (Supplemented by either cage trapping or stopped restraints)

Trained marksmen who have completed the necessary training course are deployed to shoot free-roaming badgers within the intervention area from dusk to dawn. All persons shooting badgers must be competent in the use and safe handling of firearms and will be required to demonstrate an appropriate level of marksmanship through Departmental approved training.

Non-selective culling by controlled shooting of free-roaming badgers was the prominent method used in England where it was supplemented by cage trapping where appropriate. Controlled shooting of free-roaming badgers, if chosen for NI, would follow the practice used in England although there is potential to supplement controlled shooting with either stopped restraints or baited cages.<sup>29</sup>

### 5.5.2 Cage Trapping

Baited cage trapping involves digging specially designed cages (Figure 1) into the ground close to badger setts and other locations where signs of badger activity are present.

The cages will be positioned to take advantage of any natural cover available to give trapped animals shelter from the elements (including exposure to wind/rain/low temperature and over-heating from the sun) and to reduce the risk of third-party interference.

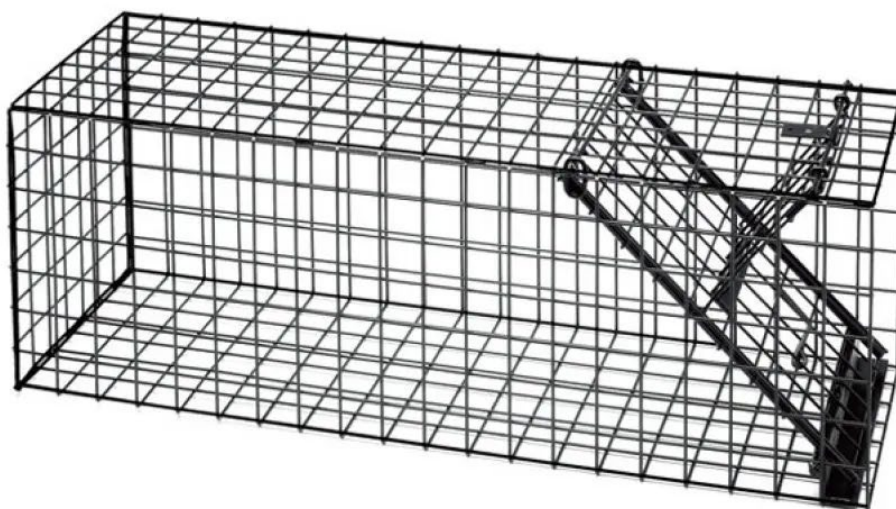
Bait (such as peanuts) is placed inside the cages nightly encouraging badgers to enter and become accustomed to the cages. During this pre-baiting phase, the cages remain open to allow free movement.

Cages are checked early each morning to ensure timely handling of any captured animals.

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<sup>29</sup> DEFRA Best practice guide to controlled shooting:  
[https://assets.publishing.service.gov.uk/media/630e1f72e90e0729dcbd7ed1/Controlled\\_Shooting\\_of\\_Free-ranging\\_Badgers\\_BPG\\_-\\_August\\_2022.pdf](https://assets.publishing.service.gov.uk/media/630e1f72e90e0729dcbd7ed1/Controlled_Shooting_of_Free-ranging_Badgers_BPG_-_August_2022.pdf)

Baited cages have already been utilised in NI during the five-year TVR research project.<sup>30</sup> Cages have also been utilised in England during culling to supplement controlled shooting.<sup>31</sup>



*Figure 1: Example of a Cage trap*

### 5.5.3 Stopped Restraints

Stopped restraints, also known as stopped body restraints, are a specially designed device made from multi-strand steel cable wound around a core nylon filament (Figure 2). The nylon filament within the multi-strand cable increases the flexibility of the restraint.

The restraints are fitted with a stop that prevent them closing beyond a minimum circumference of 28-30cm which prevents harm to a limb or non-target animals. The restraints are anchored via a short chain to enable some badger movement, and a swivel is fitted to reduce the degree of cable twisting. The anchor chain is attached to a stout bar which is driven into the ground to provide a robust anchor point.<sup>32</sup> (Figure 3)

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<sup>30</sup> Northern Ireland TVR project: <https://www.daera-ni.gov.uk/articles/test-and-vaccinate-or-remove-tvr-wildlife-intervention-research>

<sup>31</sup> DEFRA Best practice guide to carry out cage-trapping and dispatch of badgers: <https://www.gov.uk/government/publications/cage-trapping-and-dispatch-of-badgers-under-licence-to-prevent-the-spread-of-bovine-tb-in-cattle>

<sup>32</sup> Byrne et al (2015) Monitoring trap-related injury status during large-scale wildlife management programmes: an adaptive management approach <https://www.bovinetb.info/docs/monitoring-trap-related-injury-status-during-large-scale-wildlife-management-programmes-3.pdf>

This method requires no pre-baiting as the animal is not aware of the stopped restraint until it is captured. The self-locking mechanism prevents overtightening, with the swivel ensuring the animal has some movement. The stopped restraint is checked early each morning to ensure timely handling of any captured animals.

The restraints are fitted with a stop that prevents them from closing beyond a minimum circumference of 28–30 cm, which helps prevent harm to limbs and non-target animals.

In GB stopped restraints are considered a type of snare. Snares are banned in Scotland and Wales with England also considering future legislation banning their use.

Stopped restraints have been in operation for several decades in the RoI, where the Department of Agriculture, Food and the Marine (DAFM) has gained substantial field experience in their deployment. Should this option be chosen, it would be DAERA's intention to use the same specifications for stopped restraints used in the RoI.<sup>33</sup> In NI, without further legislative change to permit their use, a licence issued by the NI Environment Agency would be required.



*Figure 2: Restraint showing slider and stop*

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<sup>33</sup> RoI stopped body restraint specifications: <https://www.irishstatutebook.ie/eli/2003/si/620/made/en/print>



*Figure 3: Restraint in place (held vertically across a badger path)*

## 5.6 Monitoring

The Department will put in place proportionate arrangements to monitor the deployment of any chosen wildlife delivery approach.

This would include oversight of operational activity to ensure compliance with agreed protocols, welfare, licensing and regulatory requirements, as well as the collection and review of relevant data to assess implementation.

Monitoring would draw on a combination of field information, surveillance and epidemiological data, and reporting from delivery partners, where appropriate. The findings would be used to inform ongoing management of the intervention, contribute to periodic review, and support wider evaluation of progress within the bTB eradication strategy.

## 5.7 Other Jurisdictions

### England

England introduced its first pilot badger culls, licensed by Natural England, in 2013.

From 2015 onward, a broader badger control policy was rolled out over successive years, to cover large parts of the high-risk area in the southwest and west of England<sup>34</sup> and later, parts of the Edge area. From 2018, provision was also added to grant licences in response to hotspots in the Low Risk Area.

At its peak in 2022, there were 69 active cull licences covering over 32,000 km<sup>2</sup>. These operations were managed by licensed cull companies established by farmers, with each company operating across land areas of at least 100km<sup>2</sup>. Funding was largely provided by industry, while the government covered ancillary costs such as licensing and monitoring, as well as policing costs for public safety.

The primary method used was controlled shooting, supplemented by cage trapping.

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<sup>34</sup> Bovine TB Risk map for Great Britain: <https://tbhub.co.uk/preventing-tb-breakdowns/bovine-tb-risk-map/>

The duration of culling operations would run for a minimum of 42 nights but were dependent on the time required to sufficiently lower badger numbers to reduce the risk of disease transmission. Licences were typically issued for a four-year period, with the option in the high risk and edge areas to apply for a follow-on supplementary cull licence, which were either two or five years in duration.

On 30 August 2024, the UK Government announced the start of work with farmers and scientists on a new bovine TB strategy for England.<sup>35</sup> It committed to end the badger cull by the end of the current parliament and is moving towards non-lethal wildlife interventions.

England subsequently launched its “*Bovine TB control strategy for England As recommended by the Steering Group of the Bovine TB Partnership for England*” on 10 June 2026 which recommends that the government should develop a framework, led by the relevant experts and timed to make use of new scientific evidence as it becomes available, to help future governments determine any instances when the demonstrably high legal and scientific evidence threshold for allowing lethal control has been met.<sup>36</sup>

2025 represented the final year of culling in England’s high-risk and edge areas, leaving one licence in Cumbria, where culling is not expected to resume in 2026, with a move to badger vaccination underway.

The Department for Environment, Food and Rural Affairs (DEFRA) has also established a Badger Vaccination Field Force, supporting on-farm biosecurity and core cattle controls, which will deploy across three initial areas of England in 2026.

Alongside this, it has launched the first major badger population survey in a decade, due to complete in winter 2026/27, and started developing a new national wildlife surveillance programme.

## Republic of Ireland

The RoI’s bTB eradication programme falls under the remit of the Department of Agriculture, Food and the Marine (DAFM) and includes a wildlife intervention component, recognising badgers as a reservoir of infection in areas where disease is present in both cattle and wildlife.

Badgers are captured under licence, issued by the National Parks and Wildlife Service of the Department of Arts, Heritage, and the Gaeltacht. They are captured using a specifically designed stopped-body restraint approved under Section 34 of the 1976 Wildlife Act and a condition of the licence is that restraints are checked before noon the next day. All restraints are monitored daily. The programme has historically used

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<sup>35</sup> New TB Eradication Strategy for England: <https://www.gov.uk/government/news/government-to-end-badger-cull-with-new-tb-eradication-strategy>

<sup>36</sup> Bovine TB Control Strategy for England: <https://tbhub.co.uk/wp-content/uploads/2026/06/2026-Recommended-Bovine-TB-Strategy.pdf>

targeted, reactive culling in areas of severe herd breakdowns where epidemiological investigation identifies badgers as the likely source.

While the RoI states culling has contributed to improvements in disease trends, it is not considered sustainable as a long-term standalone measure due to its ultimate impact on badger ecology and Ireland's commitments under the Bern convention. Following extensive research, including field trials between 2014 and 2017, badger vaccination using BCG has been incorporated into the bTB programme as a complementary and increasingly substitutive approach.

Since 2018, vaccination has expanded progressively, with large-scale rollout commencing in 2019. Approximately 8,000 km<sup>2</sup> is now covered, supported by ongoing fieldwork to identify and monitor badger setts. Vaccination is delivered by trained veterinary staff and is intended to reduce transmission within badger populations and the associated risk to cattle.

Targeted removal remains in place in specific high-risk situations. In September 2025, DAFM published a new Bovine TB Action Plan<sup>37</sup> which sets out its current priorities for tackling bTB and includes an action to test badgers before vaccination, with positive animals culled.

## Wales

From 2017, Wales deployed a Trap, Test, Vaccinate or Remove approach on a small number of chronically infected farms. This was phased out in 2021 and ended 2024.

The Wales TB Eradication Programme Delivery Plan 2023-2028<sup>38</sup> maintains the commitment to prohibit badger culling for bTB control. Wales is subsequently pursuing a badger vaccination approach, supported by biosecurity measures aimed at preventing badger access to buildings, feed, water sources, and reducing cattle exposure to badger latrines and setts.

The Welsh Government noted that an independent evidence review by its Chief Scientific Adviser concluded that vaccinating badgers should help reduce the number of bTB breakdowns in cattle herds.<sup>39</sup> The Welsh Government then deployed badger vaccination in the Intensive Action Area in 2012 as part of a holistic suite of measures.

From around 2013, Wales allowed farmers that are interested in taking additional action to protect against TB on their holding to apply for a 50% Badger Vaccination Grant. This opportunity was available for limited periods and has now ceased.

Following the May 2026 election, the Welsh Government intends to maintain robust biosecurity standards and draw on the advice of the TB Technical Advisory Group in implementing a new approach to managing bTB – one which recognises wildlife as a source of infection and enables scientifically validated control methods.

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<sup>37</sup> DAFM Bovine TB Action Plan: [https://assets.gov.ie/static/documents/d4cfc18d/7784-DAFM\\_TB\\_Action\\_Plan\\_LR.pdf](https://assets.gov.ie/static/documents/d4cfc18d/7784-DAFM_TB_Action_Plan_LR.pdf)

<sup>38</sup> The Wales TB Eradication Programme Delivery Plan 2023-2028: [https://www.gov.wales/sites/default/files/publications/2023-03/wales-bovine-tb-eradication-programme-delivery-plan-2023\\_0.pdf](https://www.gov.wales/sites/default/files/publications/2023-03/wales-bovine-tb-eradication-programme-delivery-plan-2023_0.pdf)

<sup>39</sup> Independent Review of Science: <https://www.gov.wales/vaccinating-badgers>

## Scotland

Scotland (which has officially TB free status since 2009) has never carried out any wildlife intervention and the disease is not thought to be present to any degree in its wildlife.

## 5.8 Delivery and Funding approaches for Wildlife Intervention

This section outlines the prospective mechanisms for the delivery and funding of potential wildlife interventions which would form part of the Department's approach to bTB eradication.

In considering potential delivery models, an options analysis was undertaken by the Department to assess the monetary, non-monetary, and risk implications of shortlisted badger intervention approaches.

The options were costed over a five-year period for a representative 100km<sup>2</sup> area. The analysis examined a range of strategies implemented in other jurisdictions and evaluated the associated costs under different delivery models, including those led by private industry, farmer-led not-for-profit organisations, and government. The analysis also informs the Department's current position on the draft shortlisting and ranking of intervention options as outlined in **Annex VIII**.

However, as indicated, this does not represent a final decision by the Department or a preferred option but, rather is a ranking of options based on the requirement and underpinning evidence in the Options Analysis to help inform responses to this consultation and future Ministerial decision making.

This comprehensive assessment is intended to help inform the Minister's possible future decision(s) on the most appropriate intervention option, also taking account of economic, social, and environmental considerations. Further detail on the draft shortlisting of options and their assessment against monetary and non-monetary criteria, as well as risk considerations, is set out in the Options Analysis provided in **Annex VIII**. Stakeholders are invited to review the paper and take the opportunity to submit any new or additional evidence for DAERA's consideration.

### Question:

**Q7. Do you agree with the rating and scoring applied in the Options Analysis set out at annex VIII?**

Yes ☐ No ☐

## Public Sector v Private Sector Delivery

The two principal delivery options considered in the Options Analysis are public sector delivery and private sector delivery.

There is currently no public sector delivery of badger interventions in either RoI or England. In the RoI, DAFM commissions a private sector service provider to deploy wildlife interventions. In England, interventions are deployed by farmer-led companies, which are responsible for securing the necessary staff and operational resources.

In principle, all intervention options could be deployed by either the public or private sector. However, it should be noted that detailed public sector cost data is only available for cage-based delivery options. This is because DAERA has direct experience of the resources and effort required to deploy cage trapping through its involvement in the TVR feasibility study.

No other country has a dedicated cage trap approach for badger intervention, so there are no private sector delivery cost figures available from elsewhere to inform private sector cage trapping cost estimates. Rather, DAERA calculated what it would cost for public sector staff to deploy cage trapping and then made some adjustments to the costs to derive an estimate for private sector delivery of cage trap options.

DAERA does not have public sector delivery costs for restraint trap or predominant controlled shoot options as these approaches are deployed in the RoI and England with private sector delivery.

DAERA does have high level private sector delivery costs for these options, and it has been possible to extrapolate this high-level information to derive an estimate of what it might cost for private sector delivery of a restraint trap or controlled shooting cull, and for restraint-trap TVR or a vaccination only approach in NI. But, as we do not have detailed effort requirements and related detailed costs, we do not know how much of the high-level private sector cost relates to labour, or to equipment, etc. As such, it is not possible to estimate how much it might cost the public sector to carry out badger delivery options using restraints or controlled shooting.

However, using public cage trapping costs as an indicator, it is reasonable to assume that public sector delivery would also be more costly than private sector delivery for both stopped restraint and controlled shooting options. Public sector delivery is likely to be both more expensive and suboptimal compared to private sector delivery due to these factors:

- **Pay levels:** Evidence indicates that, in general, public sector wage levels tend to be higher than those in the private sector.<sup>40</sup>
- **Overheads:** Large organisations, such as the NI Civil Service, incur significant corporate overheads. When staff “full costs” are calculated, these overheads result in a substantial uplift on basic wage rates. This uplift is anticipated to be higher than

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<sup>40</sup> [Annual Survey of Hours and Earnings | Northern Ireland Statistics and Research Agency](#)

that applied by private sector organisations capable of undertaking badger deployment.

- **Workforce flexibility:** Public sector employment contracts are typically structured around standard working patterns, with additional costs associated with overtime and out-of-hours working. Private sector delivery models are generally more flexible and better able to accommodate the out-of-hours working required for badger intervention deployment.
- **Seasonality of work:** Badger deployment activity is currently seasonal rather than year-round. Most activity occurs during the “open season”, currently defined in NI as 1 July to 30 November, with limited workforce demand outside this period. Public sector employment arrangements are generally less well suited to short term, seasonal peaks in demand than those available in the private sector.

Accordingly, the wildlife intervention options presented in this consultation have been assessed on the basis that delivery would be undertaken by the private sector or through industry-led arrangements. These may include farmer-led not-for-profit models or commercial providers operating under Departmental authorisation, oversight, and monitoring.

Public sector delivery has not been assessed as an option at this stage. Evidence from the economic case within the Options Analysis, alongside experience in other jurisdictions, indicates that such an approach would involve significantly higher costs and is not supported by available budgets. Under all options presented, the Department’s role would be limited to regulation, authorisation, monitoring, and standard administrative functions.

The delivery models set out below focus on two financially viable approaches based on the Options Analysis:

- Delivery through private sector commercial providers authorised, monitored and overseen by the Department, and
- Delivery through farmer-led not-for-profit companies operating under the authorisation of and monitored and overseen by the Department.

The delivery approaches outlined above, identified as the most economically viable, are set out in further detail below. These approaches reflect international precedent for on the ground delivery, offer varying degrees of flexibility and cost effectiveness, and represent practical alternatives to public sector delivery.

Sections 5.8.1 and 5.8.2 below describe these delivery mechanisms and summarise the key advantages and limitations associated with each.

### 5.8.1 Delivery through private sector commercial providers authorised, monitored and overseen by the Department

Under this delivery model, the Department would be responsible for identifying the specific areas where wildlife intervention is required.

Once these intervention areas are determined, the Department would be responsible for identifying accredited private companies which industry could procure to undertake the operational aspects of the intervention. The private provider would be tasked with carrying out the delivery of the intervention in accordance with established protocols and standards.

Throughout the process, the Department would maintain an oversight role to ensure the intervention is conducted effectively and in line with regulatory requirements. This would include providing quality assurance, monitoring performance, and ensuring best practice is adhered to at all stages of the operation.

This model is similar to the RoI, where a private company is contracted to carry out the culling activities under the supervision of DAFM. The use of private sector providers allows for a focused operational delivery, while government oversight ensures that activities are managed with transparency and accountability.

A private delivery mechanism has been costed for all options, with the exception of proactive culling via controlled shooting. In England, this activity was delivered through a farmer-led, not-for-profit model, and no equivalent private sector cost data is available to support a direct comparison.

As discussed above, for approaches such as farmer-led controlled shooting and private restraint trapping, only high-level cost information is available. Due to the absence of detailed cost breakdowns, it is not possible to accurately split costs (e.g. labour, materials, equipment) or to develop robust, comparable estimates across delivery models (public, private, or farmer-led).

In light of these limitations, costs have been derived using the best available evidence from comparable approaches implemented elsewhere.

### 5.8.2 Delivery through farmer-led not-for-profit companies operating under authorisation, monitored and overseen by the Department.

In this approach industry would establish farmer-led “not-for-profit” companies. Following an assessment process, they would be authorised by the Department to deliver a wildlife intervention in areas identified by the Department.

The farmer, if qualified, could carry out operations themselves, or source suitably qualified labour for the tasks involved. Companies would be required to provide evidence that they have sufficient funds secured to deliver the full period of the intervention and that they have access agreements from landowners in the intervention area. Operatives would be required to demonstrate competence in the field operations

detailed in the badger intervention method approval. The Department would monitor and check competence and provide oversight to ensure best practice.

This model is a similar approach to that deployed in England where farmer-led cull companies pay for and deliver the cull under a licence. This is a highly flexible and cost-effective model, which could be scaled up in order to address emerging bTB hotspots. It also provides the opportunity for farmers to become directly involved in wildlife intervention in their local area if identified for intervention.

This delivery mechanism has been costed for controlled shooting of free-roaming badgers only and is based on costs from the English non-selective cull which used this funding model.

Farmer-led, not-for-profit delivery models could, in principle, utilise cage and restraint trapping approaches for vaccination, TVR and cull options. However, it is currently unclear whether farmer-controlled entities in NI would be willing to undertake methods other than controlled shooting. As acknowledged in the Options Analysis at **Annex VIII**, if such organisations were prepared to adopt alternative approaches, the overall cost of a farmer-led model could be lower than the estimates currently presented.

These approaches have not been costed in the Options Analysis, as robust cost estimation depends on a clear understanding of the underlying labour effort and can only be undertaken where detailed delivery model data is available. For approaches such as farmer-led controlled shooting and private restraint trapping, only high-level cost data is available. In the absence of detailed breakdowns, it is not possible to determine the proportion of costs attributable to labour, materials, equipment etc. Consequently, these approaches cannot be robustly costed on a comparable basis, whether under public, private, or farmer-led delivery models.

In summary, options analysis can only be carried out where there is evidence of costs. Where this is not possible, we can provide narrative on potential cost implications and while it is not in the Options Analysis, consultees are free to respond indicating that farmer-led not for profit companies this would be their preference regardless of the wildlife approach.

### 5.8.3 Funding approaches for Wildlife Intervention

Neighbouring jurisdictions that have implemented wildlife interventions have adopted different approaches to funding these activities. In the RoI, the bTB programme was supported through a combination of public and private funding. DAFM collect approximately €8 million annually through statutory animal disease levies; however, these funds are not ring-fenced for wildlife interventions. The wildlife component of the programme is funded by DAFM and delivered by private contractors under veterinary oversight.

In England, by contrast, wildlife intervention operated under a predominantly industry-funded model. Farmer-led companies were responsible for financing and delivering badger culling operations under licence, while government met associated oversight costs, including licensing and policing.

## Public Sector Delivery Costs v Private Sector Delivery Costs

In order to support a transparent and comprehensive comparison, indicative cost estimates have been developed for all delivery options where both public and private sector models can be robustly costed, as presented in **Tables 1 and 2**.

**Table 1** presents the economic costs associated with privately delivered wildlife intervention options for 1 x 100km<sup>2</sup> area over 5 years. For the reasons outlined above.

**Table 2** sets out economic costs for publicly delivered wildlife intervention options for 1 x 100km<sup>2</sup> area over 5 years; however, these figures are provided for illustrative purposes only.

The resources required to implement these options have been identified and assessed at their economic cost to the NI economy. Accordingly, the costs presented for each option are intended to reflect their full economic impact, expressed in real terms (i.e. excluding inflation) at 2026/27 prices. The estimates also include oversight costs to government, which are assumed to range between 8% and 34% for private sector delivery options, depending on the overall cost of the option

- **Table 1:** Private Sector Delivery of 1 x 100km<sup>2</sup> areas over 5 years (£m)

| No. of 100km <sup>2</sup> areas       | 1                                         | 1                                              | 1                                                              | 1                                        | 1                                             | 1                                         | 1                                              |
|---------------------------------------|-------------------------------------------|------------------------------------------------|----------------------------------------------------------------|------------------------------------------|-----------------------------------------------|-------------------------------------------|------------------------------------------------|
|                                       | CULL<br>Private Sector<br><br><b>CAGE</b> | CULL<br>Private Sector<br><br><b>RESTRAINT</b> | CULL<br>Private Sector<br><i>Farmer led</i><br><b>C. SHOOT</b> | TVR<br>Private Sector<br><br><b>CAGE</b> | TVR<br>Private Sector<br><br><b>RESTRAINT</b> | VACC<br>Private Sector<br><br><b>CAGE</b> | VACC<br>Private Sector<br><br><b>RESTRAINT</b> |
| Full Econ. Variable Cost - 5 Yr Total | <b>£1.609m</b>                            | <b>£0.726m</b>                                 | <b>£0.444m</b>                                                 | <b>£1.811m</b>                           | <b>£0.949m</b>                                | <b>£1.647m</b>                            | <b>£0.782m</b>                                 |

• **Table 2:** Public Sector Delivery of 1 x 100km<sup>2</sup> areas over 5 years (£m)

| No. of 100km <sup>2</sup> areas       | 1              | 1              | 1              |
|---------------------------------------|----------------|----------------|----------------|
|                                       | CULL           | TVR            | VACC           |
|                                       | Public Sector  | Public Sector  | Public Sector  |
|                                       | CAGE           | CAGE           | CAGE           |
| Full Econ. Variable Cost - 5 Yr Total | <b>£2.396m</b> | <b>£2.648m</b> | <b>£2.425m</b> |

Due to budgetary constraints on public expenditure, it is proposed that industry would fund delivery costs for private sector delivered wildlife intervention in NI.

Government would, however, meet oversight costs, including monitoring and compliance.

Following the selection of a preferred option by the Minister, more detailed implementation planning can be undertaken, including consideration of scale, timing, delivery logistics, and funding arrangements.

**Question:**

**Q8. Do you agree that any wildlife intervention option selected should be delivered by the private sector, with the Department's role limited to oversight, regulation and monitoring?**

Yes ☐ No ☐

**Question:**

**Q9. Do you agree that any wildlife intervention option selected should be funded by the private sector, with the Department funding oversight, regulation and monitoring?**

Yes ☐ No ☐

The following chapters look at each particular type of intervention under consideration, and you will be asked for your opinions on the deployment/capture methods used in each of those options. Although the trapping methods are consistent across all options, badger removal differs either through shooting (in the non-selective culling option) or via lethal injection following a positive test result (in the TVR option).

## Chapter 6: Non-Selective Culling Options

### Overview

This section should be considered alongside the evidence provided in [Chapter 3](#)

This option involves the non-selective removal of badgers by shooting within an identified intervention area of at least 100km<sup>2</sup>.

The primary goal of this option is to decrease the overall infection burden among badgers through population reduction which in turn is intended to lower the incidence of bTB in cattle.

Non-selective culling aims to achieve this goal by decreasing the badger population within the identified intervention area by up to 70% recognising outcomes may vary depending on factors such as terrain, badger behaviour, delivery method, compliance and local epidemiological context.

This option does not involve any form of testing of badgers prior to culling. All badgers within the intervention area are subject to removal, regardless of their infection status. This option would involve controlled shooting and could be delivered with additional capture methods of cage trapping and/or stopped restraints.

There are three methods for deploying a non-selective cull: controlled shooting of free-roaming badgers supplemented by cage trapping, cage trapping alone, and the use of stopped restraints. Each non-selective culling method will have cost, welfare and effectiveness considerations. More information can be found in the relevant sections below.

### 6.a Non-Selective Cull using Controlled Shooting of Free-Roaming Badgers (supplemented by cage trapping or stopped restraints)

#### Methodology

This intervention approach aims to steadily reduce the number of badgers in an identified intervention area of at least 100km<sup>2</sup>.

Given that badgers are a nocturnal species, it is intended that all operations using this approach would be conducted during nighttime hours to align with the animals' natural behaviour patterns over a six-week period.<sup>41</sup>

Under this method, death can be instantaneous and the badgers will not be held captive for any period of time. However, controlled shooting can present notable

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<sup>41</sup> Pilot badger culls in Somerset and Gloucestershire: report by the Independent Expert Panel  
<https://www.gov.uk/government/publications/pilot-badger-culls-in-somerset-and-gloucestershire-report-by-the-independent-expert-panel>

humaneness challenges due to the difficulty of ensuring an immediate, clean kill in badgers. To address and mitigate this controlled shooting is subject to detailed protocols governing training, marksmanship standards, equipment, operating distances and follow-up procedures.

DEFRA's experience outlined in 2022 provided opinion noting the likelihood of suffering in badgers culled by controlled shooting is broadly within the range of those reported for hunting or killing of other terrestrial mammals.<sup>42</sup>

While non-selective culling by controlled shooting of free-roaming badgers was the prominent method used in England, some badgers were removed by cage trap and shoot, particularly in areas where the terrain was not suited for controlled shooting. Controlled shooting, if chosen, would follow the best practices used in England<sup>43</sup> although there is also potential to supplement with stopped restraints rather than baited cages. Although costs for the approach are based on cage trapping only based on available evidence from the English intervention approach.

In smaller sub-areas within the intervention where this method may not be suitable due to terrain i.e. dense vegetation, the methodology provides for supplemental live capture with baited cages or stopped restraints.

Following this five-year intervention period, any future approach would be informed by surveillance data, disease trends and emerging scientific evidence which the Department would consider at that time.

### **Badger Welfare**

As outlined above the controlled shooting approach is considered humane and the primary objective is to ensure the animal dies instantaneously or as close as possible.

However, evidence indicates that achieving consistent outcomes may be influenced by factors such as terrain, visibility, badger behaviour and shot placement.

An Independent Expert Panel (IEP) report on the 2013 pilot culls in England found that between 7.4% and 22.8% of badgers were estimated to still be alive more than five minutes after being shot.<sup>44</sup> There was also the possibility of injured animals not being located leading to unnecessary suffering. The IEP made recommendations to further improve humaneness and reduce wounding rates

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<sup>42</sup> Natural England Chief Scientist's advice on the outcome of badger control operations, 2022: <https://www.gov.uk/government/publications/bovine-tb-summary-of-badger-control-monitoring-during-2021/summary-of-2021-badger-control-operations>

<sup>43</sup> DEFRA Best practice guide to controlled shooting: [https://assets.publishing.service.gov.uk/media/630e1f72e90e0729dcdbd7ed1/Controlled\\_Shooting\\_of\\_Free-ranging\\_Badgers\\_BPG\\_-\\_August\\_2022.pdf](https://assets.publishing.service.gov.uk/media/630e1f72e90e0729dcdbd7ed1/Controlled_Shooting_of_Free-ranging_Badgers_BPG_-_August_2022.pdf)

<sup>44</sup> Independent Expert panel report on Pilot Badger Culls: <https://assets.publishing.service.gov.uk/media/5a7ebd49ed915d74e33f21d5/independent-expert-panel-report.pdf>

The English best-practice guides were strengthened in response to IEP recommendations to mitigate against these risks in future culls.<sup>45</sup>

For this reason, controlled shooting is subject to detailed protocols governing training, marksmanship standards, equipment, operating distances and follow-up procedures.

Mitigation measures include high field-marksmanship standards, the use of thermal imaging to support accurate shot placement and the provision of clear guidance on optimal shot placement. Badgers must be at least 25m away from a sett and away from dense cover before taking a shot and advice is also given for checking for signs of life within five minutes of taking a shot. If introduced in NI, controlled shooting of free-roaming badgers would be carried out following practices in England.

Although free shooting meets acceptable welfare criteria evidence suggests that overall welfare standards are higher by using cages and stopped restraints.<sup>46 47</sup>

As all badgers within the intervention area are subject to removal without testing this means both healthy and infected animals are killed.

While culling aims to reduce the badger population by up to 70%, research indicates that populations can recover over time. A study at Woodchester Park found that badger numbers returned to pre-cull levels after around 9–10 years.<sup>48</sup>

## Cost

Indicative costs for this approach are £0.444 million for 1 x 100km<sup>2</sup> area over 5 years. This is costed on 70% controlled shooting of free-roaming badger and 30% cage trapping. It is the least expensive of the three potential deployment approaches in relation to culling. It is costed on a not-for-profit delivery model and there are fewer physical and logistical challenges compared to live capture methods.

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<sup>45</sup> DEFRA Best practice guide to controlled shooting:

[https://assets.publishing.service.gov.uk/media/630e1f72e90e0729dcdbd7ed1/Controlled\\_Shooting\\_of\\_Free-ranging\\_Badgers\\_BPG\\_-\\_August\\_2022.pdf](https://assets.publishing.service.gov.uk/media/630e1f72e90e0729dcdbd7ed1/Controlled_Shooting_of_Free-ranging_Badgers_BPG_-_August_2022.pdf)

<sup>46</sup> Natural England Chief Scientist's advice on the outcome of badger control operations, 2022:

<https://www.gov.uk/government/publications/bovine-tb-summary-of-badger-control-monitoring-during-2021/summary-of-2021-badger-control-operations>

<sup>47</sup> Independent Expert panel report on Pilot Badger

Culls: <https://assets.publishing.service.gov.uk/media/5a7ebd49ed915d74e33f21d5/independent-expert-panel-report.pdf>

<sup>48</sup> Tuytens et al (2000) Comparative study on the consequences of culling badgers (*Meles meles*) on biometrics, population dynamics and movement: <https://besjournals.onlinelibrary.wiley.com/doi/pdf/10.1046/j.1365-2656.2000.00419.x>

**Indicative costs for this approach are £0.444 million. These are generally lower than those associated with trapping methods due to reduced equipment needs and lower labour requirements.**

|                                       |        |
|---------------------------------------|--------|
| No. of 100km <sup>2</sup> areas       | 1      |
| PROACTIVE CULL                        | 5 Yrs  |
| Private Sector                        |        |
| Controlled Shooting                   |        |
|                                       | (£m)   |
| Full Econ. Variable Cost - 5 Yr Total | £0.444 |

### Question:

**Q10. Considering all the relevant factors above would you support the controlled shooting of free-roaming badgers as a potential Wildlife Intervention approach?**

- ☐ Strongly support
- ☐ Support
- ☐ Neither support nor oppose
- ☐ Oppose
- ☐ Strongly Oppose

## 6.b Non-Selective Cull using Cage Trapping

### Methodology

This intervention approach aims to reduce the number of badgers within an identified intervention area (of at least 100km<sup>2</sup>) through the use of baited [cage trapping](#).

Following a completed georeferenced sett survey, baited cage trapping would commence using a standardised two-week cycle approach. This methodology is intended to be delivered by private sector operators who have successfully completed Departmental approved training and demonstrated the required competency standards.

The deployment process involves the installation of specially designed cages, which are dug into the ground close to badger setts and other locations where clear signs of badger activity are present.

Cages are pre-baited and the cage doors are secured open, allowing free movement and enabling badgers to become accustomed to entering the cages. After this pre-baiting phase, the cages are set to close over, allowing any badgers that enter to be captured.

Cages are inspected early each morning to ensure the prompt handling of any captured animals. The cage design allows for the capture of badgers of all sizes and ages. Every badger caught would be killed humanely, by lethal gunshot while in the cage.

Trappability: Based on the NI TVR trial, it is expected that around 55% of the badger<sup>49</sup> population will be caught in the first year. Expert opinion indicates that approximately 10–13% of badgers may be "cage shy," reducing the overall efficacy of this approach.<sup>50</sup>

This approach has previously been implemented in England, where it was used to supplement free shooting in certain areas.<sup>51</sup>

Following this five-year intervention period, any future approach would be informed by surveillance data, disease trends and emerging scientific evidence which the Department would consider at that time.

### **Badger Welfare**

Cage trapping, when conducted to a high professional standard, is linked to low rates of injury among captured badgers. A study involving 1,500 cage-trapped badgers<sup>52</sup> reported that 97% of the animals showed no signs of injury following capture, indicating that this method is generally safe and humane. The remaining 3% sustained minor injuries.

Cage traps have been used in England to complement controlled shooting, as well as in the earlier large-scale research programme (the Randomised Badger Culling Trial; RBCT). Evidence from the RBCT showed that 88% of badgers sustained no detectable injuries while confined in the trap. Of the 12% that did show injuries, the majority experienced minor skin abrasions (8.6% of the total) and a small proportion (1.8% of the

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<sup>49</sup> Menzies et al (2021) Test and vaccinate or remove: Methodology and preliminary results from a badger intervention research project: <https://afbi.dspacedirect.org/server/api/core/bitstreams/e93ade5f-4c13-4548-b82c-7ecf77b2752b/content>

<sup>50</sup> Smith et al (2007) Efficacy of trapping during the initial proactive culls in the randomised badger culling trial: [https://www.researchgate.net/publication/6306225\\_Efficacy\\_of\\_trapping\\_during\\_the\\_initial\\_proactive\\_culls\\_in\\_the\\_randomised\\_badger\\_culling\\_trial](https://www.researchgate.net/publication/6306225_Efficacy_of_trapping_during_the_initial_proactive_culls_in_the_randomised_badger_culling_trial)

<sup>51</sup> DEFRA best practice guide in cage-trapping and dispatch of badgers: <https://www.gov.uk/government/publications/cage-trapping-and-dispatch-of-badgers-under-licence-to-prevent-the-spread-of-bovine-tb-in-cattle>

<sup>52</sup> Menzies et al (2021) Test and vaccinate or remove: Methodology and preliminary results from a badger intervention research project: <https://afbi.dspacedirect.org/server/api/core/bitstreams/e93ade5f-4c13-4548-b82c-7ecf77b2752b/content>

total) sustained tooth or jaw damage. Subsequent modifications to the trap door design were found to reduce the incidence of tooth damage.<sup>53</sup>

To uphold these welfare standards, all cages should be checked early each morning. This is intended to ensure any badger caught is handled promptly and humanely, reducing stress and further safeguarding animal welfare.

As all badgers within the intervention area are subject to removal without testing this means both healthy and infected animals are killed.

While culling aims to reduce the badger population by up to 70%, research indicates that populations can recover over time. A study at Woodchester Park found that badger numbers returned to pre-cull levels after around 9–10 years.<sup>54</sup>

### Costs

Indicative costs for this approach are £1.609 million for 1 x 100km<sup>2</sup> area over 5 years. Cage trapping would be the most expensive of the three potential deployment approaches options in relation to non-selective culling.

Despite their effectiveness, baited cages present logistical and financial challenges. The cages are heavy and require vehicles and trailers for transportation and setup.

Operational demands are further increased by the need for daily checking and rebaiting of traps, making this approach more resource-heavy overall when compared to stopped restraints.

The approach may also be constrained by access conditions and terrain.

|                                       |        |
|---------------------------------------|--------|
| No. of 100km <sup>2</sup> areas       | 1      |
| PROACTIVE CULL                        | 5 Yrs  |
| Private Sector                        |        |
| CAGE                                  |        |
|                                       | (£m)   |
| Full Econ. Variable Cost - 5 Yr Total | £1.609 |

<sup>53</sup> Woodroffe et al (2023) Welfare of badgers (*Meles meles*) subjected to culling: patterns of trap-related injury: <https://www.cambridge.org/core/journals/animal-welfare/article/abs/welfare-of-badgers-meles-meles-subjected-to-culling-patterns-of-traprelated-injury/4078E7313F27D5AE12AB9B4A34B60507>

<sup>54</sup> Tuytens et al (2000) Comparative study on the consequences of culling badgers (*Meles meles*) on biometrics, population dynamics and movement: <https://besjournals.onlinelibrary.wiley.com/doi/pdf/10.1046/j.1365-2656.2000.00419.x>

**Question:**

**Q11. Considering all the relevant factors above would you support a non-selective cull using baited cages as a potential Wildlife Intervention approach?**

- ☐ Strongly support
- ☐ Support
- ☐ Neither support nor oppose
- ☐ Oppose
- ☐ Strongly Oppose

## 6.c Non-Selective Cull using Stopped Restraints

### Methodology

This intervention approach aims to reduce the number of badgers within an identified intervention area of at least 100km<sup>2</sup> through a non-selective cull using stopped [restraints](#) as a capture method.

Following a completed georeferenced sett survey, stopped restraint trapping would commence within the identified intervention area. This methodology is intended to be delivered by private sector operators who have successfully completed Departmental approved training and demonstrated the required competency standards. All restraints are inspected every morning after daybreak, and any badger captured is humanely killed by lethal gunshot, while still restrained.

Unlike cage-based approaches, stopped restraints do not require pre-baiting, as the animal is unaware of the device prior to capture. The restraint incorporates a self-locking mechanism which is designed to limit closure to a minimum circumference, allowing the animal to be held without overtightening.

The swivel and anchor system enables some movement while the animal remains restrained. Restraints are checked early each morning to ensure the timely handling of any captured animals.

However, stopped restraints are less effective for trapping smaller, younger badgers. This limitation arises from the fixed minimum size of the restraint, designed to prevent overtightening on adult badgers. Therefore, as younger badgers often do not reach the necessary size and weight to be captured by this method until at least late September, this method may need to be supplemented by cage trapping in the earlier part of the

intervention period to ensure sufficient capture rates. Alternatively future consideration may be given to extending the intervention window.

Stopped restraints do not require pre-baiting and can be deployed across an intervention area with relatively limited preparation when compared with cage-trapping approaches. They are also easier to deploy physically and logistically.

Stopped restraints as a capture method has been widely implemented throughout the RoI,<sup>55</sup> where it has been carried out by a private company resulting in substantial operational experience. The company will carry out two trapping cycles of an area each year with mean trappability estimated to be 34–35% each time badgers are caught in a specific area (overall annual capture rate: 56–58%).<sup>56</sup>

Additionally, stopped restraints help avoid the challenges associated with "cage shy" badgers, which can reduce the overall effectiveness of cage trapping methods.

Following this five-year intervention period, any future approach would be informed by surveillance data, disease trends and emerging scientific evidence which the Department would consider at that time.

### **Badger Welfare**

In terms of animal welfare outcomes associated with stopped restraints, evidence consistently shows that when these devices are properly monitored, most animals experience either no injuries or minor injuries such as superficial hair or skin compression.

Data from the RoI, where postmortem assessments were carried out on more than 18,500 badgers captured in stopped restraints, found that there were no restraint-related deaths among the captured animals. Furthermore, 84% of the badgers showed either no injuries or only superficial hair/skin compression.<sup>57</sup> However, it was observed that the incidence of minor injuries increased with the length of time the animals spent in the restraints, underscoring the importance of continued vigilance regarding animal welfare during the use of this capture method.

To mitigate against potential injury stopped restraints should be checked promptly each morning to reduce the length of time any badger is kept in the restraint. This is to ensure that any welfare issues are quickly identified and addressed.

As all badgers within the intervention area are subject to removal without testing this means both healthy and infected animals are killed. While culling aims to reduce the badger population by up to 70%, research indicates that populations can recover over time. A study at Woodchester Park found that badger numbers returned to pre-cull

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<sup>55</sup> RoI stopped body restraint specifications: <https://www.irishstatutebook.ie/eli/2003/si/620/made/en/print>

<sup>56</sup> Byrne et al (2012) Population Estimation and Trappability of the European Badger (*Meles meles*): Implications for Tuberculosis Management: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0050807>

<sup>57</sup> Murphy et al (2009) An assessment of injury to European badgers (*meles meles*) due to capture in stopped restraints <https://pubmed.ncbi.nlm.nih.gov/19395757/>.

levels after around 9–10 years.<sup>58</sup>

### Costs

Indicative costs for this method are £0.726 million for 1 x 100km<sup>2</sup> area over 5 years. It is less expensive than cage trapping as stopped restraints are cheaper to procure, and deployment is less labour intensive with a lower resource requirement due to reduced equipment needs and minimal preparation requirements.

|                                       |        |
|---------------------------------------|--------|
| No. of 100km <sup>2</sup> areas       | 1      |
| PROACTIVE CULL                        | 5 Yrs  |
| Private Sector                        |        |
| RESTRAINT TRAP                        |        |
|                                       | (£m)   |
| Full Econ. Variable Cost - 5 Yr Total | £0.726 |

Question:

**Q12. Considering all the relevant factors above would you support a non-selective cull of badgers using stopped restraints as a potential Wildlife Intervention approach?**

- ☐ Strongly support
- ☐ Support
- ☐ Neither support nor oppose
- ☐ Oppose
- ☐ Strongly Oppose

<sup>58</sup> Tuytens et al (2000) Comparative study on the consequences of culling badgers (*Meles meles*) on biometrics, population dynamics and movement: <https://besjournals.onlinelibrary.wiley.com/doi/pdf/10.1046/j.1365-2656.2000.00419.x>

## Chapter 7: Test and Vaccinate or Remove (TVR)

### Overview

This section should be considered alongside the relevant evidence provided in [Chapter 3](#)

The Test and Vaccinate or Remove (TVR) approach involves the live capture of badgers within an intervention area of at least 100km<sup>2</sup>.

The TVR method removes individual badgers that have tested positive to the trap-side test from within the population while simultaneously promoting herd immunity among the remaining badgers through vaccination. This dual approach aims to reduce future disease transmission and improve the health and immunity of the badger population in the intervention area and in turn lower the incidence of bTB in cattle.

Once captured, badgers are anaesthetised to enable a blood sample to be safely obtained. This sample is then tested for bTB using a trap-side diagnostic tool, the DPP test. The test provides results within 20 minutes and has an estimated whole blood sensitivity of 69%, specificity of 98%.<sup>59</sup>

Badgers that test negative for bTB are vaccinated, micro-chipped and released back into their habitat. In contrast, badgers that test positive for *M. bovis* are humanely culled through lethal injection whilst still being under anaesthesia.

Both the DPP test and the BCG vaccine are highly effective; however, neither is 100% accurate or effective.

A study has shown that intramuscular BCG vaccination substantially reduced infection risk in badgers. Specifically, it reduced the risk of progressive infection (i.e., more advanced disease detected using a combination of diagnostic tests) by 76% and reduced the risk of infection per se (i.e., any detectable infection, including early cases identified by more sensitive tests) by 54%. Additionally, when more than one-third of a social group is vaccinated, the risk to unvaccinated cubs can be reduced by up to 79%.<sup>60</sup>

Unlike other wildlife intervention options, TVR facilitates the monitoring of disease prevalence within the population and as a result the impact of the intervention.

Each TVR method will have cost, welfare and effectiveness considerations. More information can be found in the relevant sections below.

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<sup>59</sup> M.E Arnold et al (2021) A Bayesian analysis of a Test and Vaccinate or Remove study to control bovine tuberculosis in badgers (*Meles meles*): <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0246141>

<sup>60</sup> Carter et al (2012) BCG Vaccination Reduces Risk of Tuberculosis Infection in Vaccinated Badgers and Unvaccinated Badger Cubs: <https://pmc.ncbi.nlm.nih.gov/articles/PMC3521029/>

## 7a TVR Using Baited Cages

### Methodology

This TVR method involves using [baited cages](#) to trap badgers within an identified intervention area of at least 100km<sup>2</sup>.

Following a completed georeferenced sett survey, baited cage trapping would commence using a standardised two-week cycle approach. This methodology is designed to be delivered by private sector operators who have successfully completed Departmental approved training and demonstrated the required competency standards.

The deployment process involves the installation of specially designed cages, which are dug into the ground close to badger setts and other locations where clear signs of badger activity are present.

Cages are pre-baited and the cage doors are secured open, allowing free movement and enabling badgers to become accustomed to entering the cages. After this pre-baiting phase, the cages are set to close over, allowing any badgers that enter to be captured.

Cages are inspected early each morning to ensure the prompt handling of any captured animals. The cage design allows for the capture of badgers of all sizes and ages.

All captured badgers are uniquely identified, anaesthetised and tested using a trap-side DPP test.<sup>61</sup>

Badgers that test negative for bTB are vaccinated with a BCG vaccine and then released.

Badgers that test positive for bTB are humanely euthanised via lethal injection.

During the five-year intervention, those that are caught again the following years are retested and revaccinated if they test negative. Captured badgers are only vaccinated once each year.

Both the DPP test and the BCG vaccine are highly effective; however, neither is 100% accurate or effective.

A study has shown that Intramuscular BCG vaccination substantially reduced infection risk in badgers—by 76% for progressive infection and 54% for infection per se

When more than one-third of a social group is vaccinated, the risk to unvaccinated cubs can be reduced by up to 79%.<sup>62</sup>

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<sup>61</sup> Arnold et al (2021) A Bayesian analysis of a Test and Vaccinate or Remove study to control bovine tuberculosis in badgers (Meles meles): <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0246141>

<sup>62</sup> Carter et al (2012) BCG Vaccination Reduces Risk of Tuberculosis Infection in Vaccinated Badgers and Unvaccinated Badger Cubs: <https://pmc.ncbi.nlm.nih.gov/articles/PMC3521029/>

Trappability: Based on the NI TVR trial, it is expected that around 55% of the badger<sup>63</sup> population is caught in the first year, and about half of those are caught again the following year.

However, expert opinion<sup>64</sup> indicates that approximately 10–13% of badgers may be "cage shy", reducing the overall efficacy of this approach.

Following this five year intervention period, any future approach would be informed by surveillance data, disease trends and emerging scientific evidence which the Department would consider at that time.

### **Badger Welfare**

Cage trapping, when conducted to a high professional standard, is linked to low rates of injury among captured badgers. A study involving 1,500 cage-trapped badgers<sup>65</sup> reported that 97% of the animals showed no signs of injury following capture, indicating that this method is generally safe and humane. The remaining 3% sustained minor injuries. To uphold these welfare standards, all cages should be checked early each morning to ensure any badger caught is handled promptly and humanely, reducing stress and further safeguarding animal welfare.

Cage traps have been used in England to complement controlled shooting, as well as in the earlier large-scale research programme (the RBCT). Evidence from the RBCT showed that 88% of badgers sustained no detectable injuries while confined in the trap. Of the 12% that did show injuries, the majority experienced minor skin abrasions (8.6% of the total). A small proportion (1.8% of the total) sustained tooth or jaw damage. Subsequent modifications to the trap door design were found to reduce the incidence of tooth damage.

Expert opinion<sup>66</sup> indicates that approximately 10–13% of badgers may be "cage shy," reducing the overall efficacy of this approach.

Unlike other wildlife intervention options, TVR facilitates the monitoring of disease prevalence within the population and as a result the impact of the intervention.

The TVR approach minimises disruption to the broader badger population by targeting only those animals that are confirmed to be infected with bTB. As a result, healthy badgers are vaccinated and released, which helps maintain population stability and reduces the potential disturbance within the social structure of the species.<sup>67</sup> The removal of infected animals has a reducing effect on the infection pressure in the

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<sup>63</sup> Menzies et al (2021) Test and vaccinate or remove: Methodology and preliminary results from a badger intervention research project: <https://afbi.dspacedirect.org/server/api/core/bitstreams/e93ade5f-4c13-4548-b82c-7ecf77b2752b/content>

<sup>64</sup> Smith et al (2007) Efficacy of trapping during the initial proactive culls in the randomised badger culling trial: [https://www.researchgate.net/publication/6306225\\_Efficacy\\_of\\_trapping\\_during\\_the\\_initial\\_proactive\\_culls\\_in\\_the\\_randomised\\_badger\\_culling\\_trial](https://www.researchgate.net/publication/6306225_Efficacy_of_trapping_during_the_initial_proactive_culls_in_the_randomised_badger_culling_trial)

<sup>65</sup> Test and vaccinate or remove: Methodology and preliminary results from a badger intervention research project: <https://afbi.dspacedirect.org/server/api/core/bitstreams/e93ade5f-4c13-4548-b82c-7ecf77b2752b/content>

<sup>66</sup> Efficacy of trapping during the initial proactive culls in the randomised badger culling trial: [https://www.researchgate.net/publication/6306225\\_Efficacy\\_of\\_trapping\\_during\\_the\\_initial\\_proactive\\_culls\\_in\\_the\\_randomised\\_badger\\_culling\\_trial](https://www.researchgate.net/publication/6306225_Efficacy_of_trapping_during_the_initial_proactive_culls_in_the_randomised_badger_culling_trial)

<sup>67</sup> Menzies et al (2021) Test and vaccinate or remove: Methodology and preliminary results from a badger intervention research project: <https://afbi.dspacedirect.org/server/api/core/bitstreams/e93ade5f-4c13-4548-b82c-7ecf77b2752b/content>

population. Test positive badgers are euthanised via lethal injection while still under anaesthetic.

### Costs

Indicative costs for this method are £1.811 million for 1 x 100km<sup>2</sup> area over 5 years. It is generally higher than for non-selective culling-based methods. This is because of the test requirements and the necessity of veterinary expertise. Cage trapping would be the more expensive of the TVR capture options.

Despite their effectiveness, baited cages present logistical and financial challenges. The cages are heavy and require vehicles and trailers for transportation and setup.

Operational demands are further increased by the need for daily checking and rebaiting of traps, making this approach more resource-heavy overall when compared to stopped restraints.

The approach may also be constrained by access conditions and terrain.

|                                       |        |
|---------------------------------------|--------|
| No. of 100km <sup>2</sup> areas       | 1      |
| TVR                                   | 5 Yrs  |
| Private Sector                        |        |
| CAGE                                  |        |
|                                       | (£m)   |
| Full Econ. Variable Cost - 5 Yr Total | £1.811 |

**Question:**

**Q13. Considering all the relevant factors above would you support a Test and Vaccinate or Remove using baited cages as a trapping method as a potential Wildlife Intervention approach?**

- ☐ Strongly support
- ☐ Support
- ☐ Neither support nor oppose
- ☐ Oppose
- ☐ Strongly Oppose

## 7b TVR Using Stopped Restraints

### Methodology

This TVR method involves using stopped [restraints](#) to trap badgers within an identified intervention area of at least 100km<sup>2</sup>.

Following a completed georeferenced sett survey, stopped restraint trapping would commence within the identified intervention area. This methodology is intended to be delivered by private sector operators who have successfully completed Departmental approved training and demonstrated the required competency standards. All restraints are inspected every morning after daybreak.

Unlike cage-based approaches, stopped restraints do not require pre-baiting, as the animal is unaware of the device prior to capture. The restraint incorporates a self-locking mechanism that prevents overtightening once activated, and the swivel and anchor system enables some movement while the animal remains restrained. Restraints are checked early each morning to ensure the timely handling of any captured animals.

However, stopped restraints are less effective for trapping smaller, younger badgers. This limitation arises from the fixed minimum size of the restraint, designed to prevent overtightening on adult badgers. Therefore, as younger badgers often do not reach the necessary size and weight to be captured by this method until at least late September this method may need to be supplemented by cage trapping in the earlier part of the intervention period. Alternatively, future consideration may be given to extending the intervention window.

The absence of a pre-baiting requirement enables stopped restraints to be deployed swiftly and efficiently in the field when compared with cage-trapping approaches. Stopped restraints as a capture method has been widely implemented throughout the RoI,<sup>68</sup> where it has been carried out by a private company resulting in substantial operational experience with this method.

During the five-year intervention, badgers that test negative for bTB are vaccinated with Badger BCG vaccine and then released. Those that are caught again the following year are retested and revaccinated if they test negative. Captured badgers are only vaccinated once each year.

Badgers that test positive for bTB are humanely removed via lethal injection.

Both the DPP test and the BCG vaccine are highly effective; however, neither is 100% accurate or effective.

A study has shown that Intramuscular BCG vaccination substantially reduced infection risk in badgers—by 76% for progressive infection and 54% for infection per se.

When more than one-third of a social group is vaccinated, the risk to unvaccinated cubs can be reduced by up to 79%.<sup>69</sup>

Trappability: – The company will carry out two trapping cycles of an area each year with mean trappability estimated to be 34–35% each time badgers are caught in a specific area (overall annual capture rate: 56–58%; across the population).<sup>70</sup>

Additionally, stopped restraints help avoid the challenges associated with "cage shy" badgers, which can reduce the overall effectiveness of cage trapping methods.

Following this five-year intervention period, any future approach would be informed by surveillance data, disease trends and emerging scientific evidence which the Department would consider at that time.

### **Badger Welfare**

In terms of animal welfare outcomes associated with stopped restraints, evidence consistently shows that when these devices are properly monitored, most animals experience either no injuries or minor effects such as superficial hair or skin compression. Data from the RoI, where postmortem assessments were carried out on more than 18,500 badgers captured in stopped restraints, found that there were no restraint-related deaths among the captured animals.

Furthermore, 84% of the badgers showed either no injuries or superficial hair/skin compression. However, it was observed that the incidence of minor injuries increased

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<sup>68</sup> RoI stopped body restraint specifications: <https://www.irishstatutebook.ie/eli/2003/si/620/made/en/print>

<sup>69</sup> Carter et al (2012) BCG Vaccination Reduces Risk of Tuberculosis Infection in Vaccinated Badgers and Unvaccinated Badger Cubs: [BCG Vaccination Reduces Risk of Tuberculosis Infection in Vaccinated Badgers and Unvaccinated Badger Cubs - PMC](#)

<sup>70</sup> Byrne et al (2012) Population Estimation and Trappability of the European Badger (*Meles meles*): Implications for Tuberculosis Management: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0050807>

with the length of time the animals spent in the restraints, underscoring the importance of continued vigilance regarding animal welfare during the use of this capture method.<sup>71</sup>

To mitigate against potential injury the devices should be checked promptly each morning to reduce the length of time any badger is kept in restraint. Throughout the deployment period, it is essential that a high level of welfare vigilance is maintained to ensure that any welfare issues are quickly identified and addressed, safeguarding the well-being of all animals involved.

Unlike other wildlife intervention options, TVR facilitates the monitoring of disease prevalence within the population and as a result, the impact of the intervention.

The TVR approach minimises disruption to the broader badger population. Unlike non-selective culling methods, TVR targets only those animals that test positive for bTB. As a result, healthy badgers are vaccinated and released, which helps maintain population stability and does not disturb the social structure of the species.<sup>72</sup> The removal of infected animals has a reducing effect on the infection pressure in the population.

Test positive badgers are euthanised via lethal injection while still under anaesthetic.

### Cost

Indicative costs for this method are £0.949 million for 1 x 100km<sup>2</sup> area over 5 years. This is less costly than 100% cage trapping as they are cheaper to procure, and deployment is less labour intensive. As with TVR with cages they will be higher than non-selective cull-based methods due to the additional operational steps required, including more complex handling processes and the involvement of veterinary professionals, both of which increase overall resource need.

|                                       |        |
|---------------------------------------|--------|
| No. of 100km <sup>2</sup> areas       | 1      |
| TVR                                   | 5 Yrs  |
| Private Sector                        |        |
| RESTRAINT TRAP                        |        |
|                                       | (£m)   |
| Full Econ. Variable Cost - 5 Yr Total | £0.949 |

<sup>71</sup>Murphy et al (2009) An assessment of injury to European badgers (*meles meles*) due to capture in stopped restraints: <https://pubmed.ncbi.nlm.nih.gov/19395757/>

<sup>72</sup>Menzies et al (2021) Test and vaccinate or remove: Methodology and preliminary results from a badger intervention research project : <https://afbi.dspace.direct.org/server/api/core/bitstreams/e93ade5f-4c13-4548-b82c-7ecf77b2752b/content>

**Question:**

**Q14. Considering all the relevant factors above would you support a Test and Vaccinate or Remove using stopped restraints as a trapping method as a potential Wildlife Intervention approach?**

- ☐ Strongly support
- ☐ Support
- ☐ Neither support nor oppose
- ☐ Oppose
- ☐ Strongly Oppose

## Chapter 8: Vaccination Only Options

### Overview

This section should be considered alongside the relevant evidence provided in [Chapter 3](#)

The Vaccination only approach involves the capture of badgers within an intervention area of at least 100km<sup>2</sup>.

It relies exclusively on vaccination with BCG vaccine as the mechanism for reducing disease transmission and does not include any lethal measures.

Under this approach, all badgers that are captured within the intervention area are vaccinated without any testing taking place and are subsequently released back into the local environment. As a result, both uninfected and potentially infected badgers remain within the population following capture, vaccination and release.

The primary objective of vaccination only is to increase herd immunity within the badger population over time through repeated and consistent vaccination. By increasing the proportion of immune animals, this approach aims to reduce the infection burden and slow the transmission of *M. bovis* between badgers and, indirectly, to cattle. However, vaccination does not provide a therapeutic benefit to animals that are already infected. Consequently, under a vaccination only approach, potentially infected badgers are vaccinated but remain in the population, limiting the immediate epidemiological benefit of this intervention.

Modelling outputs and field experience indicate that while badger intervention can reduce bTB levels, approaches that include a lethal component, whether non-selective or selective, tend to provide a faster reduction in disease prevalence and transmission than vaccination only. This difference reflects the fact that removal-based interventions directly reduce the pool of infectious animals, whereas vaccination only intervention acts gradually by modifying population susceptibility over time.<sup>73</sup>

In an RoI study carried out in areas where much of the landscape had already been subjected to reactive badger culling for several years, it showed that badger BCG vaccination was not inferior to (i.e. no worse than) targeted badger culling in most, but not all, trial areas.<sup>74</sup> However, Chang (2025)<sup>75</sup> states that badger vaccination when combined with a cattle, test and removal programme may not be sufficient to achieve eradication on its own in the RoI.

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<sup>73</sup> Smith et al (2025) Bovine tuberculosis model validation against a field study of badger vaccination with selective culling: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0320830>

<sup>74</sup> Martin et al (2020) Is moving from targeted culling to BCG-vaccination of badgers (*Meles meles*) associated with an unacceptable increased incidence of cattle herd tuberculosis in the RoI? A practical non-inferiority wildlife intervention study in the RoI (2011-2017): <https://www.sciencedirect.com/science/article/pii/S0167587719308086>

<sup>75</sup> Chang et al (2025) Evaluating the effectiveness of badger vaccination combined with cattle test and removal in managing Bovine Tuberculosis: Insights from a two-host and multi-route transmission model: <https://pubmed.ncbi.nlm.nih.gov/39616657/>

For vaccination to have a meaningful population-level impact, a sufficiently high and sustained proportion of the badger population would need to be vaccinated over multiple years.

Required vaccine coverage to achieve badger herd immunity is dependent on underlying badger bTB prevalence in the area and is therefore indirectly affected by potential previous interventions that might have taken place in that area.<sup>76</sup>

A sufficient proportion of the badger population would need to be vaccinated each year to achieve herd immunity.<sup>77 78</sup> It is estimated in some modelling studies that around 30-40% of the badger population would need to be vaccinated each year to achieve badger herd immunity but this outcome was predicated on the programme of culling that had reduced badger bTB prevalence.

Available evidence therefore indicates that a vaccination-only approach, if chosen, would need to be sustained over a prolonged period and delivered at high coverage to achieve its intended effect.<sup>79</sup>

## 8.a Vaccination Only Using Baited Cages

### Methodology

This vaccination only method involves using baited [cages](#) to trap badgers within an identified intervention area of at least 100km<sup>2</sup>.

Following a completed georeferenced sett survey, baited cage trapping would commence using a standardised two-week cycle approach. This methodology is designed to be delivered by private sector operators who have successfully completed Departmental approved training and demonstrated the required competency standards.

The deployment process involves the installation of specially designed cages, which are dug into the ground close to badger setts and other locations where clear signs of badger activity are present.

Cages are pre-baited and the cage doors are secured open, allowing free movement and enabling badgers to become accustomed to entering the cages. After this pre-baiting phase, the cages are set to close over, allowing any badgers that enter to be captured.

Cages are inspected early each morning to ensure the prompt handling of any captured animals. The cage design allows for the capture of badgers of all sizes and ages. During

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<sup>76</sup> Smith et al (2025) Bovine tuberculosis model validation against a field study of badger vaccination with selective culling: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0320830>

<sup>77</sup> Smith et al (2018) Modelling as a Decision Support Tool for Bovine TB Control Programs in Wildlife: <https://pmc.ncbi.nlm.nih.gov/articles/PMC6232866/>

<sup>78</sup> Roberson et al (2025) Can Badger Vaccination Contribute to bovine TB Control? A Narrative review of the evidence: <https://www.sciencedirect.com/science/article/pii/S0167587725000492>

<sup>79</sup> Wilkinson et al (2004) A model of bovine tuberculosis in the badger *Mele mele*: an evaluation of different vaccination strategies: <https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/j.0021-8901.2004.00898.x>

the five-year intervention every badger caught is vaccinated and marked. This is done without anaesthetic. No testing takes place.

A study has shown that Intramuscular BCG vaccination substantially reduced infection risk in badgers—by 76% for progressive infection and 54% for infection per se.

When more than one-third of a social group is vaccinated, the risk to unvaccinated cubs can be reduced by up to 79%.<sup>80</sup>

At present only a veterinarian can vaccinate a badger in NI, whereas in England and Wales trained lay vaccinators carry out this role. *(Later in chapter 9 we will be asking for your views on extending legislation in GB to NI to allow for the licencing of trained lay vaccinators to administer the BCG vaccine to badgers).*

Trappability: Based on the NI TVR trial, it is expected that around 55% of the badger population is caught in the first year, and about half of those are caught again the following year and revaccinated.<sup>81</sup> Captured badgers are only vaccinated once each year. However, expert opinion<sup>82</sup> indicates that approximately 10–13% of badgers may be "cage shy", reducing the overall efficacy of this approach.<sup>83</sup>

## Badger Welfare

Cage trapping, when conducted to a high professional standard, is linked to low rates of injury among captured badgers. A study involving 1,500 cage-trapped badgers<sup>84</sup> reported that 97% of the animals showed no signs of injury following capture, indicating that this method is generally safe and humane. The remaining 3% sustained minor injuries. To uphold these welfare standards, all cages should be checked early each morning. This ensures any badger caught is handled promptly and humanely, reducing stress and further safeguarding animal welfare.

Cage traps have been used in England to complement controlled shooting, as well as in the earlier large-scale research programme (the RBCT). Evidence from the RBCT showed that 88% of badgers sustained no detectable injuries while confined in the trap. Of the 12% that did show injuries, the majority experienced minor skin abrasions (8.6% of the total). A small proportion (1.8% of the total) sustained tooth or jaw damage. Subsequent modifications to the trap door design were found to reduce the incidence of tooth damage.

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<sup>80</sup> Carter et al (2012) BCG Vaccination Reduces Risk of Tuberculosis Infection in Vaccinated Badgers and Unvaccinated Badger Cubs: [BCG Vaccination Reduces Risk of Tuberculosis Infection in Vaccinated Badgers and Unvaccinated Badger Cubs - PMC](https://pubmed.ncbi.nlm.nih.gov/22511111/)

<sup>81</sup> Menzies et al (2021) Test and vaccinate or remove: Methodology and preliminary results from a badger intervention research project: <https://afbi.dspace.direct.org/server/api/core/bitstreams/e93ade5f-4c13-4548-b82c-7ecf77b2752b/content>

<sup>82</sup> Smith et al (2007) Efficacy of trapping during the initial proactive culls in the randomised badger culling trial: [https://www.researchgate.net/publication/6306225\\_Efficacy\\_of\\_trapping\\_during\\_the\\_initial\\_proactive\\_culls\\_in\\_the\\_randomised\\_badger\\_culling\\_trial](https://www.researchgate.net/publication/6306225_Efficacy_of_trapping_during_the_initial_proactive_culls_in_the_randomised_badger_culling_trial)

<sup>83</sup> Smith et al (2007) Efficacy of trapping during the initial proactive culls in the randomised badger culling trial: [https://www.researchgate.net/publication/6306225\\_Efficacy\\_of\\_trapping\\_during\\_the\\_initial\\_proactive\\_culls\\_in\\_the\\_randomised\\_badger\\_culling\\_trial](https://www.researchgate.net/publication/6306225_Efficacy_of_trapping_during_the_initial_proactive_culls_in_the_randomised_badger_culling_trial)

<sup>84</sup> Menzies et al (2021) Test and vaccinate or remove: Methodology and preliminary results from a badger intervention research project: <https://afbi.dspace.direct.org/server/api/core/bitstreams/e93ade5f-4c13-4548-b82c-7ecf77b2752b/content>

Expert opinion indicates that approximately 10–13% of badgers may be "cage shy", reducing the overall efficacy of this approach.<sup>85</sup>

Vaccination leaves a stable badger population as no animals are removed. However, infected animals capable of transmitting infection remain in the population.

### Cost

Indicative costs for this method are £1.647 million for 1 x 100km<sup>2</sup> area over 5 years. It is generally higher than for non-selective culling-based methods. This is because of the necessity of veterinary expertise. Cage trapping would be more expensive than stopped restraints.

Despite their effectiveness, baited cages present logistical and financial challenges. The cages are heavy and require vehicles and trailers for transportation and setup.

Operational demands are further increased by the need for daily checking and rebaiting of traps, making this approach more resource-heavy overall when compared to stopped restraints.

The approach may also be constrained by access conditions and terrain.

Deployment typically occurs over an extended period, requiring trained operatives to carry out trapping, conduct daily trap checks, and administer vaccines, all of which add to the cost. However, this vaccination approach could potentially be delivered at lower cost if lay vaccination were extended to Northern Ireland. Accordingly, vaccination options have been costed on the basis that lay vaccination is in place, reflecting the most cost-effective delivery model.

|                                       |        |
|---------------------------------------|--------|
| No. of 100km <sup>2</sup> areas       | 1      |
| VACCINATION                           | 5 Yrs  |
| Private Sector                        |        |
| CAGE                                  |        |
|                                       | (£m)   |
| Full Econ. Variable Cost - 5 Yr Total | £1.647 |

<sup>85</sup>Smith et al (2007) Efficacy of trapping during the initial proactive culls in the randomised badger culling trial: [https://www.researchgate.net/publication/6306225\\_Efficacy\\_of\\_trapping\\_during\\_the\\_initial\\_proactive\\_culls\\_in\\_the\\_randomised\\_badger\\_culling\\_trial](https://www.researchgate.net/publication/6306225_Efficacy_of_trapping_during_the_initial_proactive_culls_in_the_randomised_badger_culling_trial)

**Question:**

**Q15. Considering all the relevant factors above would you support Vaccination Only using baited cages as a trapping method as a potential Wildlife Intervention approach?**

- ☐ Strongly support
- ☐ Support
- ☐ Neither support nor oppose
- ☐ Oppose
- ☐ Strongly Oppose

## 8.b Vaccination Using Stopped Restraints

### Methodology

This vaccination only method involves using stopped restraints to trap badgers within an identified intervention area of at least 100km<sup>2</sup>.

Following a completed georeferenced sett survey, stopped restraint trapping would commence within the identified intervention area. This methodology is intended to be delivered by private sector operators who have successfully completed Departmental approved training and demonstrated the required competency standards. All restraints are inspected every morning after daybreak, to ensure the prompt handling of any captured animals.

Unlike cage-based approaches, stopped restraints do not require pre-baiting, as the animal is unaware of the device prior to capture. The restraint incorporates a self-locking mechanism that prevents overtightening once activated, and the swivel and anchor system enables some movement while the animal remains restrained. Restraints are checked early each morning to ensure the timely handling of any captured animals.

However, stopped restraints are less effective for trapping smaller, younger badgers. This limitation arises from the fixed minimum size of the restraint, designed to prevent overtightening on adult badgers. Therefore, as younger badgers often do not reach the necessary size and weight to be captured by this method until at least late September this method may need to be supplemented by cage trapping in the earlier part of the intervention period. Future consideration may also be given to extending the intervention window.

The absence of a pre-baiting requirement enables stopped restraints to be deployed swiftly and efficiently in the field when compared with cage-trapping approaches. Stopped restraints as a capture method has been widely implemented throughout the RoI,<sup>86</sup> where it has been carried out by a private company resulting in substantial operational experience with this method.

During the five-year intervention every badger caught is vaccinated and marked. This is done without anaesthetic. No testing takes place.

A study has shown that Intramuscular BCG vaccination substantially reduced infection risk in badgers—by 76% for progressive infection and 54% for infection per se.

When more than one-third of a social group is vaccinated, the risk to unvaccinated cubs can be reduced by up to 79%.<sup>87</sup>

**Trappability:** The company will carry out two trapping cycles of an area each year with mean trappability estimated to be 34–35% each time badgers are caught in a specific area (overall annual capture rate: 56–58%; across the population).<sup>88</sup> Those that are caught again the following year are revaccinated. Captured badgers are only vaccinated once each year.

At present only a veterinarian can vaccinate a badger in NI, whereas in England and Wales trained lay vaccinators carry out this role. *(Later in chapter 9 we will be asking for your views on extending legislation in GB to NI to allow for the licensing of trained lay vaccinators to administer BCG vaccine to badgers).*

## **Badger Welfare**

In terms of animal welfare outcomes associated with stopped restraints, evidence consistently shows that when these devices are properly monitored, most animals experience either no injuries or minor injuries such as superficial hair or skin compression. Data from the RoI, where postmortem assessments were carried out on more than 18,500 badgers captured in stopped restraints, found no restraint related deaths among the captured animals.<sup>89</sup> Furthermore, 84% of the badgers showed either no injuries or superficial hair/skin compression. However, it was observed that the incidence of minor injuries increased with the length of time the animals spent in the restraints, underscoring the importance of continued vigilance regarding animal welfare during the use of this capture method.<sup>90</sup>

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<sup>86</sup> RoI stopped body restraint specifications: <https://www.irishstatutebook.ie/eli/2003/si/620/made/en/print>

<sup>87</sup> Carter et al (2012) BCG Vaccination Reduces Risk of Tuberculosis Infection in Vaccinated Badgers and Unvaccinated Badger Cubs: [BCG Vaccination Reduces Risk of Tuberculosis Infection in Vaccinated Badgers and Unvaccinated Badger Cubs - PMC](https://pubmed.ncbi.nlm.nih.gov/22500000/)

<sup>88</sup> Byrne et al (2012) Population Estimation and Trappability of the European Badger (*Meles meles*): Implications for Tuberculosis Management: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0050807>

<sup>89</sup> Byrne et al (2015) Monitoring trap-related injury status during large-scale wildlife management programmes: an adaptive management approach: <https://www.bovinetb.info/docs/monitoring-trap-related-injury-status-during-large-scale-wildlife-management-programmes-3.pdf>

<sup>90</sup> Murphy et al (2009) An assessment of injury to European badgers (*meles meles*) due to capture in stopped restraints: <https://pubmed.ncbi.nlm.nih.gov/19395757/>.

To mitigate against potential injury the devices should be checked promptly each morning to reduce the length of time any badger is kept in restraint. Throughout the deployment period, it is essential that a high level of welfare vigilance is maintained to ensure that any welfare issues are quickly identified and addressed, safeguarding the well-being of all animals involved.

Vaccination leaves a stable badger population as no animals are removed. However, infected animals capable of transmitting infection remain in the population.

### Cost

Indicative costs for this method are £0.782 million for 1 x 100km<sup>2</sup> area over 5 years. They are generally lower than those associated with vaccination only by cage trapping as stopped restraints are cheaper to procure, and deployment is less labour intensive. No baiting is required and they can trap badgers from the first night of deployment. Additionally, a vaccination only approach could potentially be less expensive should lay vaccination be extended to NI as this removes the need for veterinary support. Accordingly, vaccination options have been costed on the basis that lay vaccination is in place, reflecting the most cost-effective delivery model.

|                                       |        |
|---------------------------------------|--------|
| No. of 100km <sup>2</sup> areas       | 1      |
| VACCINATION                           | 5 Yrs  |
| Private Sector                        |        |
| RESTRAINT TRAP                        |        |
|                                       | (£m)   |
| Full Econ. Variable Cost - 5 Yr Total | £0.782 |

### Question:

**Q16. Considering all the relevant factors above would you support Vaccination Only using stopped restraints as a trapping method as a potential Wildlife Intervention approach?**

- ☐ Strongly support
- ☐ Support
- ☐ Neither support nor oppose
- ☐ Oppose
- ☐ Strongly Oppose

## Chapter 9: Lay Vaccinators

Vaccinating badgers is one of the potential tools available to help reduce the spread of bTB.

Vaccination may be deployed in three potential settings:

1. Intervention vaccination (i.e. as the sole wildlife intervention approach taken forward).
2. Post-intervention vaccination (e.g. as part of any transition phase following an initial 5-year wildlife intervention such as non-selective culling or TVR).
3. Preventive vaccination in areas not currently implicated in wildlife-associated bTB spread, to reduce the risk of establishment and onward transmission to cattle.

Effective and safe delivery of badger vaccination requires a sufficient number of trained personnel.

For that reason, we are seeking views on permitting trained, licensed lay vaccinators — individuals who are not vets, but who have completed approved training— to administer badger vaccination under strict conditions and with veterinary oversight.

### 9.1 Why Lay Vaccination?

At present, badger vaccination in NI must be carried out by a veterinarian as vaccinating an animal is considered an act of veterinary surgery as it involves administering medicine under the Veterinary Surgeons Act 1966.<sup>91</sup>

However, in Great Britain an exemption exists which allows non-vets to vaccinate animals under certain conditions.

The expected benefits of enabling the training and licensing for lay vaccinators include:

- Increased capacity and responsiveness, allowing larger or more continuous vaccination coverage.
- Improved operational efficiency and cost-effectiveness.
- Support for preventive vaccination where appropriate.
- Embedded welfare compliant, non-lethal wildlife management practices.

### 9.2 Lay Vaccination in Great Britain

In GB, the use of trained lay vaccinators forms an established component of badger vaccination delivery and is supported by a clear statutory and licensing framework.<sup>92 93</sup>

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<sup>91</sup> Veterinary Surgeons Act 1966: <https://publications.parliament.uk/pa/cm200708/cmselect/cmenvfru/348/348.pdf>

<sup>92</sup> Badger Vaccination – Guidance for Veterinary Surgeons: [https://tbhub.co.uk/wp-content/uploads/2025/08/BV-Vet-guidance-2-page-version\\_18.08.2025.pdf](https://tbhub.co.uk/wp-content/uploads/2025/08/BV-Vet-guidance-2-page-version_18.08.2025.pdf)

<sup>93</sup> Licence to cage-trap badgers for bovine TB vaccination: <https://www.gov.uk/government/publications/licences-to-cage-trap-and-mark-badgers-for-bovine-tb-vaccination/licence-to-cage-trap-badgers-for-bovine-tb-vaccination-cl48>

Under the Veterinary Surgery (Vaccination of Badgers against Tuberculosis) Order 2010, lay persons who have completed an approved training course and hold a valid certificate of competence may administer the BCG vaccine to wild badgers by intramuscular injection, provided they act under the direction of a veterinary surgeon.

This model enables vaccination programmes to be delivered at greater scale, expanding operational capacity while maintaining veterinary oversight. Directing veterinary surgeons remain responsible for prescribing the vaccine and ensuring appropriate supervision arrangements, including being available, or delegating availability to an attending vet, for any emergency situations. All individuals, including veterinary surgeons and lay vaccinators, must additionally hold the relevant licences to cage-trap and mark badgers for vaccination.

### 9.3 Proposal Overview

The Department proposes to seek an amendment to the Veterinary Surgery (Vaccination of Badgers Against Tuberculosis) Order 2010<sup>94</sup> which would extend its operation to NI.

This would allow the establishment of a NI licensing scheme that permits trained lay vaccinators to trap and vaccinate badgers using an authorised BCG vaccine under veterinary prescription and clinical direction, subject to compliance with:

- Competency/training accreditation.
- Animal welfare and wildlife protection law.
- Biosecurity and health & safety.
- Data recording, reporting and monitoring.

### 9.4 Legal Powers

The Veterinary Surgery (Vaccination of Badgers Against Tuberculosis) Order 2010 currently applies in GB only and it provides a legal mechanism enabling trained lay persons to administer the BCG vaccine to badgers under veterinary prescription and oversight.

Extending this Order would ensure that NI has a clear, lawful basis for authorising lay vaccination aligned with established GB regulatory standards.

Amending this Statutory instrument would be facilitated by DEFRA as it progresses through a UK parliamentary process and would be subject to the necessary approvals required under that legislation.

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<sup>94</sup> Veterinary Surgery (Vaccination of Badgers Against Tuberculosis) Order 2010:  
<https://www.legislation.gov.uk/ukSI/2010/580/contents>

**Question:**

**Q17. Do you agree that the Veterinary Surgery (Vaccination of Badgers Against Tuberculosis) Order 2010 should be extended to NI allowing for the lay vaccination of badgers in NI, under licence to support bTB control?**

☐ Yes    ☐ No

## Chapter 10: Bovine Tuberculosis in Northern Ireland: Blueprint for Eradication

### 10.1 Overview

This chapter invites views on the broader eradication approach set out in the *Bovine Tuberculosis in Northern Ireland: Blueprint for Eradication*.

### 10.2 The Blueprint

The Blueprint (**Annex X**) is a roadmap for NI's long-term ambition to achieve eradication by 2050. It was developed by the TBPSG and brings together several areas of work, including:

- Stronger disease controls on farms.
- Better biosecurity.
- Improved testing and surveillance.
- Partnership working with industry.
- Consideration of wildlife as part of the disease picture.

The Blueprint takes a “whole-system” approach, recognising that disease control depends on actions across livestock, wildlife, and the wider environment. The Strategy aims to be proportionate, science-led, environmentally responsible, and adaptable, allowing measures to be developed, introduced gradually and reviewed as new evidence emerges.

The Blueprint outlines an action plan to explore, develop and implement measures under three key pillars to achieve eradication: people; cattle and wildlife measures. The Blueprint action plan also lists steps relating to finance and regionalisation.

### 10.3 People Pillar in the Blueprint: People and Governance Measures

The Blueprint for the Eradication of Bovine Tuberculosis in NI recognises the role of those involved in the delivery of bTB control measures, including farmers, private veterinary practitioners, industry stakeholders and government staff.

This pillar considers the importance of shared responsibility, effective communication and partnership working across the sector. It also acknowledges the impact of bTB breakdowns on those affected and the need to consider the adequacy of information, engagement and support arrangements. The role of training and professional development is identified as a factor in supporting the consistent application of evidence-based approaches.

### 10.4 Cattle Pillar in the Blueprint: Cattle Measures

The Cattle Pillar of the *Bovine Tuberculosis in Northern Ireland: Blueprint for Eradication* is focused on strengthening those measures, both current and in the future, that directly influence the transmission of disease within and between cattle herds. It seeks to

reduce the risk of infection through the continued development and application of robust, science-led surveillance and testing regimes, proportionate and effective cattle movement controls, and enhanced biosecurity practices designed to minimise opportunities for disease spread.

This pillar highlights the importance of using reliable and up-to-date data to guide decisions, as well as maintaining strong reporting practices and meeting legal standards. These measures help detect disease trends early and allow for quick, evidence-based action when risks are found.

In delivering the Cattle Pillar, the Department will continue to refine operational processes and work in partnership with herd keepers, private veterinary practitioners and other stakeholders to support the implementation of best practice in herd health and biosecurity.

## 10.5 Wildlife Pillar in the Blueprint: Wildlife Measures

Research shows that wildlife can play a part in maintaining or spreading disease. For this reason, the Blueprint includes a wildlife element to make sure all possible sources of bTB infection are understood and addressed.

**This part of the strategy is designed to:**

- Reduce the risk of infection passing between wildlife and livestock.
- Support the effectiveness of controls already in place for cattle.
- Contribute to lowering infection levels overall as a healthy wildlife population reduces intra and inter species spread.

The Blueprint does not specify the wildlife intervention measures to be taken forward. Instead, it allows a range of potential options to be explored and assessed.

## 10.6 Developing Wildlife Intervention Options

Although linked to the Blueprint, potential wildlife intervention options have been developed and are being consulted on separately in this document. This approach ensures:

- Transparency and focused public engagement.
- Careful consideration of ecological, ethical and animal welfare issues.
- A robust scientific and operational assessment of each option.
- Clear governance and decision-making.

Any wildlife measures introduced will complement, not replace, both existing and future controls for cattle and people. Any further proposals arising from the Blueprint will also be subject to consultation as and when required.

## 10.7 How Wildlife Measures Fit Within the Wider Strategy

Wildlife intervention will sit alongside actions already in place to improve herd management, strengthen biosecurity, enhance testing, and support farmers through advice and partnership working.

No single action can eradicate bTB on its own. Wildlife measures are one part of a broader, coordinated programme.

## 10.8 Conclusion

The Blueprint provides NI with a roadmap for a long-term, strategic plan to eliminate bTB.

It is a continually evolving document and we are taking this opportunity to ask for stakeholders' views on our approach to fighting this disease.

Public and stakeholder input is essential to ensure that the eradication programme is effective, proportionate, and meets the needs of NI's people, environment, and agriculture sector.

### Question:

**Q18. Are you content that the Blueprint strategy contains all necessary actions to address bTB in NI?**

☐ Yes    ☐ No

## Chapter 11 – How to Respond and When

### 11.1 Responding to the Consultation.

The Public Consultation on Potential Wildlife Intervention Options as part of the Bovine Tuberculosis in Northern Ireland: Blueprint for Eradication is open until Friday, 25 September 2026

A copy of the consultation document is available on the DAERA website at:

<https://www.daera-ni.gov.uk/consultations/consultation-on-potential-wildlife-intervention-options-part-bovine-tuberculosis-northern-ireland-blueprint-eradication>

You can respond to this consultation online at the NIDirect consultation Hub - Citizen Space at: <https://consultations.nidirect.gov.uk/>

Responses by email should be sent to: [TB.Consultation@daera-ni.gov.uk](mailto:TB.Consultation@daera-ni.gov.uk)

Written responses will be accepted, although the aforementioned methods are preferable. Again, you should use the Consultation Questionnaire provided, as this will aid our analysis of the responses received. Please send your response to:

Bovine TB Consultation TBBR Policy Team  
Animal Health & Welfare Division  
Department of Agriculture, Environment and Rural Affairs  
Ballykelly House  
111 Ballykelly Road  
Ballykelly  
Limavady  
BT49 9HP

Please ensure that consultation responses are submitted to arrive by the closing date of Friday, 25 September 2026

While details of particular circumstances described in a response to a consultation exercise may usefully inform the policy process, consultation exercises cannot address individual concerns and comments, which should be directed to the relevant public body.

### 11.2 How to make an enquiry

If you have any queries about this consultation please contact the Department of Agriculture, Environment and Rural Affairs, Animal Health & Welfare Division, TB/BR Policy Team:

Email: [TBBR.Policybranch@daera-ni.gov.uk](mailto:TBBR.Policybranch@daera-ni.gov.uk)

### 11.3 Confidentiality

The Freedom of Information Act 2000 gives the public a right of access to any information held by a public authority, the Department in this case. This includes information provided in response to this consultation. The Department will publish a synopsis of responses to the consultation. This will include a list of names of organisations that responded but not personal names, addresses or other contact details. The Department cannot automatically consider information supplied to it in response to a consultation, to be confidential. However, it does have a responsibility to decide whether any information provided by you in response to a consultation, including information about your identity, should be made public or treated as confidential.

If you do not wish information about your identity to be made public please include an explanation in your response. Please be aware that confidentiality cannot be guaranteed, except in very particular circumstances.

Please note, if your computer automatically includes a confidentiality disclaimer, it won't count as a confidentiality request. Should you respond in an individual capacity: the Department will process your personal data in accordance with the Data Protection Act 1998.

This means that your personal information will not be disclosed to third parties should you request confidentiality. For further information about confidentiality of responses please contact the Information Commissioners Office (see its website at [www.informationcommissioner.gov.uk](http://www.informationcommissioner.gov.uk))

Bovine TB Consultation TBBR Policy Team  
Animal Health & Welfare Division  
Department of Agriculture, Environment and Rural Affairs  
Ballykelly House  
111 Ballykelly Road  
Ballykelly  
Limavady  
BT49 9HP

[www.daera-ni.gov.uk](http://www.daera-ni.gov.uk)



Department of  
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An Roinn  
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Department o'  
**Fairmin, Environment  
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