OSPRI | MBfree

Mycoplasma bovis

National Operational Plan

Contents

PART 1 – *M. BOVIS* PROGRAMME OVERVIEW

1. Introduction

This document is the National Operational Plan (NOP) for the Biosecurity (National *Mycoplasma bovis* Pest Management Plan) Order 2024 (NPMP). It has been prepared to meet the requirements for an operational plan under section 100B of the Biosecurity Act 1993 (the Act).

The NOP provides the detail on how the NPMP objectives will be met, and the key performance indicators against which progress towards the achievement of the objectives will be measured. Operational policies which guide the technical and procedural implementation of *Mycoplasma bovis* (*M. bovis*) control activities are documented in Part Two Operational Policies.

Definitions of technical terms used in the NOP are set out in the Glossary.

Under Sections 100B(1)(b) and (c) of the Biosecurity Act 1993, the management agency must review the NOP annually and decide on any necessary amendments. This review and amendment process will allow for further development and refinement of operational measures and policies towards the effective achievement of the NPMP's objective.

Annual reporting on the NOP (as required under Section 100B(2)(a) of the Biosecurity Act) is provided for in the Annual Report of OSPRI NZ Ltd.

This document was prepared by *M. bovis* Free New Zealand Limited (MBfree), a wholly owned subsidiary of OSPRI New Zealand Ltd. MBfree is the management agency for the NPMP pursuant to section 100 of the Act.

Background to the disease

M. bovis is a bacterium that can cause serious health conditions in cattle and is commonly found in cattle world-wide. New Zealand was one of the last countries free of *M. bovis* until July 2017, when it was first detected here. Clinical signs in cattle include mastitis that doesn't respond to treatment, pneumonia, arthritis, and late-term abortions. It therefore constitutes an animal welfare and productivity issue. In some situations, infection in a herd can lead to significant economic and welfare challenges for farmers.

M. bovis mainly spreads from infected to uninfected cattle through close contact and indirectly in contaminated milking environments. Transmission from farm to farm can occur via movement of cattle, raw milk, and semen used in artificial insemination. Infected cattle can still spread *M. bovis* even if there are no clinical signs of disease. There may be potential for aerosol spread in certain situations (e.g. dense congregation and sustained high prevalence of *M. bovis* infection among cattle in feedlots).

M. bovis does not infect humans and presents no food safety risk.

M. bovis is an economically significant pathogen of cattle throughout the world.

Eradication is the best approach to management of *M. bovis* in New Zealand

The management of the disease is particularly challenging for a number of reasons:

- The high amount of cattle movement in New Zealand, which gives the opportunity for dissemination of infection through the cattle population.
- The long term and broad range of effects of *M. bovis*.
- The lack of effective tools for treating the disease and controlling the impacts the disease can cause.

As a result, the impacts of *M. bovis* on farmer and rural community welfare can be severe.

Current diagnostic tests, while effective in distinguishing between infected and uninfected herds, can miss detecting individual infected cattle. As a result, decisions must be made at a herd level, with depopulation being the only way to remove the risk of infection remaining in the herd.

Eradication is considered the best approach to managing *M. bovis* in New Zealand given the limited number of herds infected during this incursion, the fact that the disease was found relatively early (i.e. a limited number of herds were found to be infected at the time of detection), and the likelihood of re-incursion and onward spread is considered to be very low. The economic cost-benefit analysis also supported eradication as the best option for New Zealand. It was estimated the cost of letting *M. bovis* spread would have been $1.3 billion in lost productivity in the first 10 years alone.

2. Strategic Context

M. bovis was identified for the first time in New Zealand in July 2017 in a dairy herd in South Canterbury, triggering an exotic disease incursion response by Biosecurity New Zealand. By March 2018, the total infected properties had risen to 28 and MPI directed the cull of remaining animals on all confirmed properties.

In May 2018, the New Zealand Government decided, in consultation with industry partners in the Government industry agreement for readiness and response (GIA)[1], to establish the *M. bovis* Eradication Programme to eradicate *M. bovis* from New Zealand.

As of January 2025, there are no active confirmed properties (i.e. properties with infected cattle) and a total of 282 confirmed properties have been cleared of infection. Infection has been confirmed on farms in both the North and South Islands with most of these 282 cleared confirmed properties located in the Canterbury region. The dissemination of infected cattle from dairies has been the main way that infection has spread in New Zealand. Most of the previously confirmed properties are non-dairy farms that have sourced infected cattle from dairy farms.

Analysis of the genetic sequences and epidemiology of *M. bovis* in New Zealand suggests that the incursion occurred only a few years before it was detected in 2017. The original incursion was of a single genetic strain, sequence type 21 (ST-21). Genetic change of ST-21 over time has created four subgroups of sequences, or Clades (Clades 1-4). Clade 2 has been the only ST-21 Clade found since mid-2020.

In June 2022, a dairy farm was found to be infected with a different strain, ST-29. This represented a second incursion of *M. bovis* into New Zealand, most likely via imported bovine semen. Animal movement tracing and testing has confirmed that the ST-29 infection has been controlled and has not spread to other farms.

The *M. bovis* Eradication Programme was initially implemented and funded through a GIA Operational Agreement between MPI, Dairy NZ and Beef + Lamb NZ.

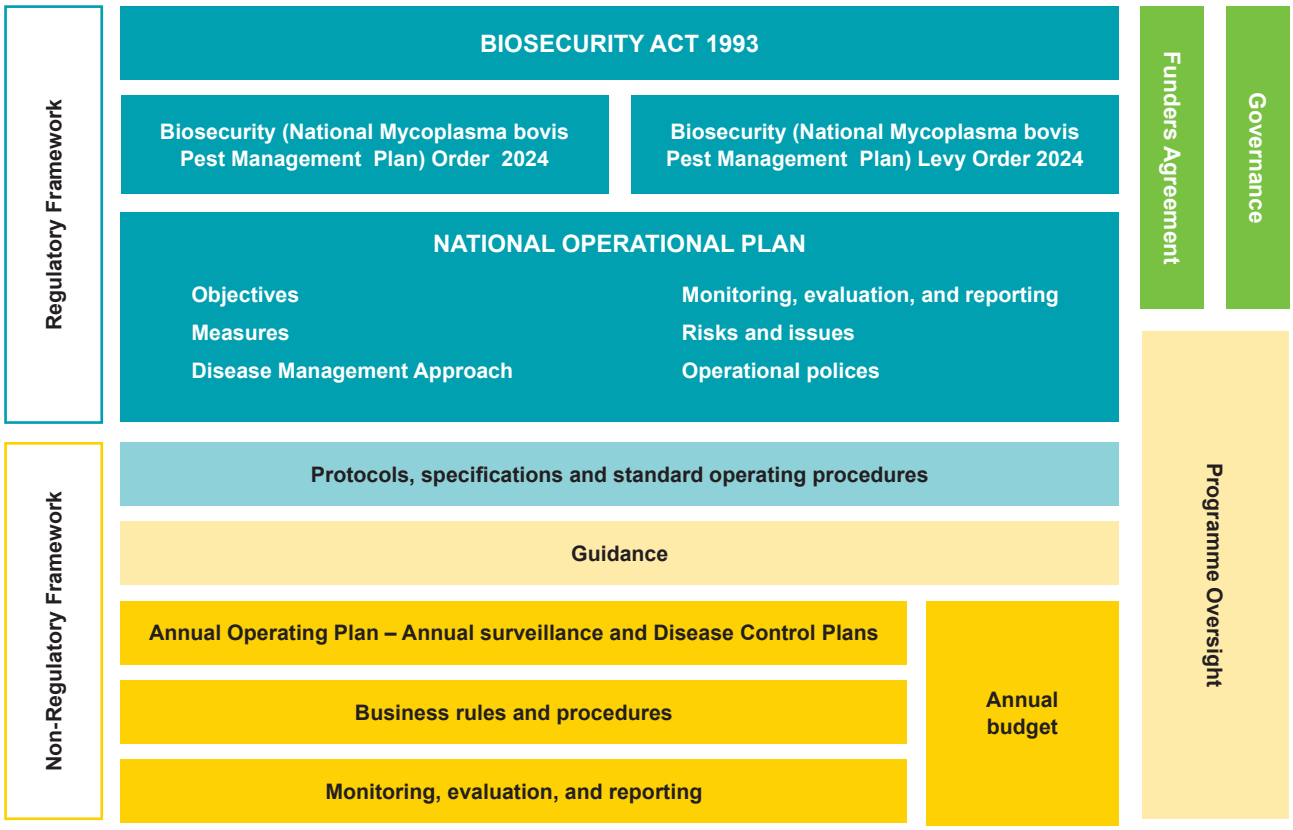
In 2024, the *M. bovis* Governance Group submitted a proposal to the Minister for Biosecurity for a National Pest Management Plan and associated levy orders for the eradication of *M. bovis* pursuant to Part 5 of the Act. A National Pest Management Plan is a comprehensive strategy aimed at controlling and reducing the impact of pests on a national level. They are established to protect valuable ecosystems, agricultural sectors, and native species from harmful pests.

The NPMP came into effect 1 January 2025, and established MBfree (a wholly owned subsidiary of OSPRI New Zealand) as the management agency.

The NPMP is implemented through a mix of regulatory and non-regulatory instruments (protocols, standard operating procedures, a funding agreement, guidance, annual plans). Figure 1 sets out the expected high-level framework for management of the *M. bovis* programme under the NPMP.

1 The GIA is a partnership established under Part 5A of the Act for the purpose of enabling government and industry to work together to achieve the best possible outcomes from readiness or response activities.

Figure 1: *Operating framework for the M. bovis National Pest Management Plan*



The National *M. bovis* Pest Management Plan

Principal Objective

The principal objective of the NPMP is to **reduce the adverse effects of *M. bovis* on economic well-being by eradicating it from New Zealand by 30 June 2028.**[2]

The intermediate outcome of the NPMP is to eradicate *M. bovis* in the population of cattle in New Zealand by 30 June 2028.

M. bovis is to be treated as having been eradicated from the population of cattle in New Zealand when it is assessed by the management agency as being present in no more than 0.01% of the population of cattle on cattle farms in New Zealand to a confidence level of at least 95%.[3]

Although there is no international requirement, or defined criteria, for *M. bovis* eradication, a 95% level of confidence is likely to be acceptable to international phytosanitary authorities such as the World Organisation for Animal Health (WOAH) and trading partners that may wish to evaluate New Zealand's *M. bovis* status. It is the confidence level set by WOAH for foot and mouth disease serological freedom surveys.[4] A 95% level of confidence leaves a very low chance (5%) that infection has been left undetected. The Programme's eradication definition was reviewed and deemed appropriate by a panel of external epidemiology experts.

2 Biosecurity (National Mycoplasma bovis Pest Management Plan) Order 2024, Schedule 1, Clause 7.
3 Ibid. Schedule 1 Clause 9.
4 World Organisation for Animal Health. Terrestrial Animal Health Code. 2024. Article 8.8.43. Accessed via: www.woah.org

Measures to achieve the NPMP objective

The overarching approach will be delivered through the following measures summarised below. The detailed measures are set out in Schedule 1, Clause 10 of the NPMP[5]:

- Carrying out surveillance, sampling, and testing for *M. bovis.*
- Controlling movement of cattle and of any things that are risk goods for *M. bovis.*
- Collecting information to enable tracing of the movement of cattle and of any things that are risk goods for *M. bovis*
- Tracing those movements.
- Depopulating cattle management groups that are infected with *M. bovis.*
- Managing populations of feral cattle in locations associated with a high level of infection
- Cleaning and disinfecting any place (or part of a place), or anything at a place, at which cattle infected, or suspected of being infected with *M. bovis* were kept before they were destroyed.
- Growing awareness and adoption of *M. bovis* risk management practices, through education, engagement, and collaboration.
- Developing and implementing applied research and development programmes.

Operational policies to guide and support the delivery of these measures, if needed, are set out in Part Two of this document. Section 5 outlines the measurement and reporting of the NPMP objectives.

5 Ibid. Schedule 1, Clause 10.

3. Disease Management Approach

Phases of Disease Eradication

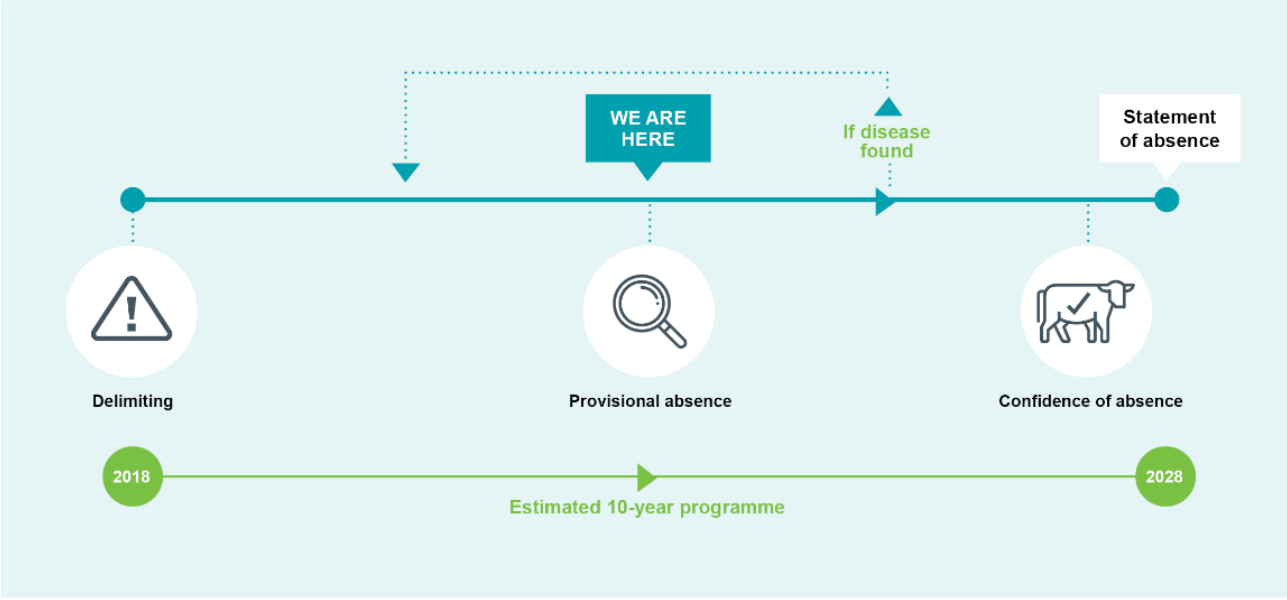
The *M. bovis* programme started in 2018 and is expected to finish in 2028.

There are three phases to the *M. bovis* Programme as illustrated in Figure 2:

- Delimiting — identify and remove cases of infection.
- Provisional absence — focus on monitoring the cattle population through background surveillance[6]. Two consecutive clear spring and two consecutive clear autumn calving periods are required to move out of the provisional absence phase.
- Confidence of absence — background surveillance continues until a 95% level of confidence that *M. bovis* is eradicated has been achieved. This phase is expected to run for two years. The confidence of absence phase ends with an MBfree statement of absence that *M. bovis* is eradicated.

Phases of the *M. bovis* programme

Figure 2: *Phases of Disease Eradication for M. bovis in New Zealand*



Key activities within each disease eradication phase are set out in Table 1 below.

6 Background surveillance screens for infection in the cattle population across the country. The primary objective of background surveillance is to build confidence of absence. The bulk tank milk screening component of background surveillance is useful for case finding. Bulk tank milk screening can only look for evidence of infection in milking cows. Infection in heifer calves will take at least two years to be captured by bulk tank milk screening.

Table 1: *Key elements of the M. bovis eradication phases*

DISEASE ERADICATION PHASE	ACTIVITIES
Delimiting	• Focus on network surveillance[7] using disease control tools, namely forward and back tracing, validation, sampling, testing, and genomics analysis to understand disease spread throughout the network of infected farms. • Depopulation, cleaning, disinfection and stand down of all Confirmed Properties. • Background surveillance for case finding and confidence of absence.
Provisional absence	• The focus is on monitoring the cattle population through background surveillance. • Data are gathered to support confidence of absence. • Data contribute to confidence of absence from the **critical date** (i.e., when we believe *M. bovis* was last actively circulating; last farm to farm transmission event). • Background surveillance continues for two full autumn and spring calving seasons after the critical date. • Dairy cows born prior to the critical date have calved and are captured by bulk tank milk surveillance during this phase. This activity is based on the time it takes (at least two years) for a female calf to start supplying milk for commercial processing. • Cattle slaughtered at meat processing plants that were born prior to the critical date are captured by meat processing plant surveillance during this phase. • Background surveillance thresholds are reviewed and adjusted to balance surveillance objectives with impacts to farmers. • Any 'detect'[8] results are followed up using disease control tools, including risk assessment, validation, tasking of field work, sampling, laboratory testing, results interpretation, and technical capability to guide investigations at a minimum. • Any infected farms found are followed up using the full complement of disease control tools including case investigation, tracing, validation, tasking of field work, sampling, laboratory testing, results interpretation, depopulation, cleaning and disinfection, stand down, and genomics analysis. • The extent of infection spread associated with infected farms is determined as an outcome of network surveillance. The critical date may be reset depending on epidemiological and genomic investigation of any infected farm.

7 Network surveillance focusses on delimiting infection in the network created by the movement of cattle and risk goods from infected properties. The primary objective of network surveillance is case finding.

8 A detect result is a positive screening result from background surveillance. A detect result is not confirmation of infection. Further testing on-farm is required to confirm or rule out infection.

DISEASE ERADICATION PHASE	ACTIVITIES
Confidence of absence	• Background surveillance continues until we achieve the NPMP intermediate outcome. The Confidence of Absence Phase is expected to take two years of background surveillance from the end of the Provisional Absence phase to achieve the level of confidence required for eradication. • Data gathered by background surveillance are analysed using a Scenario Tree Model (STM) to quantify and monitor the progress of our level of confidence. • Any infected farms found are followed up using the full complement of disease control tools including case investigation, tracing, validation and assessment of risk, tasking of field work, sampling, laboratory testing, results interpretation, depopulation, cleaning and disinfection, stand down, and genomics analysis. • Any infected farm found during this phase will be assessed for its impact on the critical date and the principal objective. • The confidence of absence phase ends when the required level of confidence is achieved and the principal objective is met.
Post-eradication	• Once eradication of *M. bovis* is achieved, the *M. bovis* Programme will close. Any subsequent monitoring required in relation to *M. bovis* will be subject to usual MPI biosecurity practices and any specific requirements that exist after the Programme closes.

Disease Control

Confirmation of a new *M. bovis* infection will be followed up using the full complement of disease control tools including case investigation, tracing, risk assessment, contacting the farm to validate information, tasking of field work, sampling, laboratory testing, results interpretation, genomics analysis, depopulation, cleaning and disinfection, and stand down as necessary.

The risk of spread of *M. bovis* is managed by taking appropriate measures for properties that are identified as being infected or at risk of being infected. The measures may include:

- movement controls, restricting cattle and risk goods moving on and off the property
- depopulation
- cleaning, disinfection, and stand-down.

Movement controls stay in place until either:

- Testing shows that the management group(s) are not infected.
- Infected management groups are depopulated, properties cleaned and disinfected, and the Programme is satisfied that the property no longer presents an infection risk.

There are five main disease control functions within the *M. bovis* Programme:

Tracing

Tracing involves using all available data sources to identify properties at risk due their association with a confirmed property (CP) or a network linked property (NLP). Associations may include movements of cattle or risk goods, being in proximity, or through shared ownership and/or management. Properties at risk will be assigned risk events in our data management system that describe the reason they are considered at risk.

Validation

Validation involves assessing risk events assigned to properties to determine if further action is required. Risk assessments consider several factors, including the business practice of the farm and previous testing history. Investigations may be closed at this point if a risk assessment rules out the need for further action. If more information is needed to assess the level of risk and what action is required, the farmer may be contacted to verify information (e.g. if particular movements took place, if there are any cattle of interest remaining on farm). If the risk event cannot be resolved, further action will be required, which typically includes on-farm sampling of cattle.

Sample Management

Sample Management is the administration of on-farm sampling activities. It involves the review and interpretation of test results in accordance with protocols designed by epidemiology specialists and trigger appropriate follow-up actions as required.

Epidemiology

The technical specifications for the *M. bovis* Programme have been developed by specialist epidemiologists, in line with published disease control principles, which provide the foundation underpinning the delivery of eradication measures. Epidemiologists support disease control decision-making for situations that fall outside of the specifications (e.g. complex case work).

The epidemiologists review surveillance specifications to ensure the specifications are appropriate for the stage of the eradication, interpret genomic analysis outputs, and design and monitor confidence of absence surveillance.

Service Delivery

Service Delivery is the critical farmer facing function which ensures timely dissemination and processing of information to and from the field. This includes direct support to affected farmers throughout investigations, serving legal notices, monitoring and auditing compliance, and facilitating/overseeing operational activities such as depopulation and cleaning and disinfection. The service delivery function also provides education, engagement and support for the wider farming community and industry.

Surveillance for Confidence of Absence of *M. bovis*

Surveillance focusses on demonstrating that *M. bovis* has been eradicated from New Zealand once evidence indicates our disease control activities have been successful at stopping farm-to-farm spread of *M. bovis*. The probability that eradication has been achieved will be expressed as *Confidence of Absence* of *M. bovis* from New Zealand.

Confidence of absence (CoA) is the probability that unidentified infected herds remain at or above a specified prevalence expressed as a percentage.

Surveillance contributes to CoA from the critical date which is the last time farm-to-farm transmission of *M. bovis* is thought to have occurred. A STM is used to estimate CoA. These models calculate the contribution of each stream of surveillance to the cumulative assessment of disease absence, weighting background surveillance results according to the risk of infection in each sampled herd. Provided no further infection is detected, CoA will increase over time until the required target threshold is met.

The NPMP CoA target is 95% confidence that *M. bovis* has been eradicated, at a farm-level design prevalence of between 0.005% to 0.01%[9]. This level of confidence is a standard threshold used in veterinary epidemiology and likely to be acceptable to international phytosanitary authorities (such as the World Organisation for Animal Health) and to trading partners that may wish to evaluate New Zealand's *M. bovis* status. At 95% confidence there is only a small chance (5%) that *M. bovis* remains which protects the investment made and allows farmers to farm free of *M. bovis*.

The time to reach 95% CoA is a function of background surveillance intensity, taking into account the epidemiology of *M. bovis*, the availability of places and cattle population groups for surveillance, and budgetary constraints. In particular, background surveillance for CoA must continue for long enough to ensure that sufficient volumes of specific animal populations (such as calves and beef breeding cattle) have had time to become available for sampling by surveillance streams.

Data for estimating CoA will be obtained from five background surveillance streams – Bulk Tank Milk Surveillance, Meat Processing Plant Surveillance, On-Farm Beef and Drystock Surveillance, Feedlot Pre-Arrival Sampling, and follow up of report cases.

CoA surveillance operations have been designed and will be updated to obtain minimum animal or herd surveillance volumes broadly shown in the table below.

Table 2: *Minimum animal or herd surveillance volumes*

SURVEILLANCE STREAM	SAMPLING VOLUME
Bulk Tank Milk Surveillance	140,000 samples/annum^
Meat Processing Plant Surveillance	240,000 samples/annum
On-Farm Beef and Drystock Surveillance	15,000-30,000 samples/annum*
Feedlot Pre-Arrival Sampling	35,000-40,000 samples/annum
Report Cases	As notified

^ *This sampling volume is representative of approximately 4 million dairy cattle being sampled each month via Bulk Tank Milk Surveillance.*

* *The range for on-farm beef and drystock testing allows for farmer-driven, voluntary testing of dairy heifers and breeding bulls as well as providing options for targeted testing of beef breeding herds at times convenient to the farmer. Further targeted testing may be required to bolster surveillance sensitivity in situations where other surveillance streams are not meeting targets.*

The above sample volumes should enable the 95% CoA target to be reached at the end of four years of surveillance from the critical date. To achieve the target earlier, surveillance intensity would need to substantially increase and there would be less opportunity to screen for undetected infection in cohorts of heifers (i.e. less autumn and spring bulk tank milk screening rounds).

Sampling will be implemented according to Operational Policies specified in this NOP, and under Standard Operating Procedures and service delivery contracts developed by MBfree. These will consider matters such as geographic distribution of sampling according to *M. bovis* infection history and the surveillance availability of animals (such as reaching milking or slaughter ages at or over 24 months of age).

Surveillance volumes and targets will be reviewed annually and optimised to inform the annual surveillance plans. For example, volumes and targets may need to be revised if there are access issues to meat processing plants, if feedlot pre-arrival sampling does not meet the target number of samples, or if the critical date is re-set.

9 Ibid. Schedule 1 Clause 9.

CoA surveillance will also be supplemented with, and informed by, data from other surveillance targeted at area-, herd-, or place-level disease risks. For example, sampling that may occur under Rule 14 of the NPMP.

Confirmation of infection in the Provisional Absence or Confidence of Absence Phases

Confirmation of more recent spread since the critical date will require the CoA surveillance timeframe to be re-set starting with a new critical date. Confirmation of a new incursion of *M. bovis* may not affect the settings of the critical date.

In the event we confirm infection on a property in the future, the case investigation will inform decisions by MBfree, in consultation with NPMP funders, on changes to the disease management approach.

4. Review and reporting

MBfree will review the NOP annually and will submit a report on NOP implementation and performance to the Minister for Biosecurity no later than five months after the end of each financial year[10].

This report will be publicly available on MBfree's website. If the review process identifies any required amendments to the NOP, then the report to the Minister will be accompanied by an amended NOP. An amended NOP, or any parts of it, may be disallowed by the Minister within 20 working days if the Minister believes it to be inconsistent with the NPMP.

The achievement of the NPMP objective, including the intermediate outcome, will be assessed against the measures set out in clause 11(2) of Schedule 1 of the NPMP.[11] The annual report on the NOP will report on the following key performance indicator (KPI) measures and targets as set out in Table 3. An epidemiological commentary will accompany the key performance indicators.

Table 3: *M. bovis NPMP performance measures and targets*

NPMP KPI MEASURE	TARGET	REPORTING
The number of farming properties and other locations in which cattle are confirmed to have been infected with *M. bovis*	Number of active confirmed properties at 30 June (year) is zero [and total number of confirmed properties does not exceed +2 in any one year]	Number of active confirmed properties Number of cleared confirmed properties
How rapidly MBfree identifies events that have increased the risk that cattle at a place are infected with *M. bovis* and (where appropriate) launches investigations		
• High-risk detect responsiveness (detects that require notice of direction (NOD))	NOD served within 10 business days	Report the average and % within KPI
• Low-risk detect responsiveness (detects that require Active Surveillance)	Sampling tasked within 15 business days	Report the average and % within KPI
• Report case responsiveness	Initial contact made by investigating vet/ epi analyst to the informant within 1 business day of MBfree receiving the report. Sample request tasked to test result received within 13 business days.	Report the average and % within KPI
• Positive round of on-farm sampling reactivity: (3% herd level or PCR positive)	Result received to notice served within 2 business days	Report by exception

10 The annual reporting on the NOP is included in the Annual Report of OSPRI NZ Ltd.
11 Ibid. Schedule 1, Clause 11.

NPMP KPI MEASURE	TARGET	REPORTING
The level of surveillance and associated confidence of absence from *M. bovis*		
• Annual sampling targets by surveillance stream (No. valid samples collected)^	• BTM: 140,000 • Pre-arrival sampling: 35,000 –40,000 (for 2 years from critical date) • BBS: 15,000-30,000 • MPPS: 195,000-243,000	Report actual number collected for the period and year-to-date
• Minimum annual CoA targets to achieve eradication goal of 95% CoA by 30 June 2028 (after accounting for probability of introduction)	• 72% by 30 June 2025 • 87% by 30 June 2026 • 93% by 30 June 2027 • 95% by 30 June 2028	Report CoA as % at the end of each financial year
The level of compliance with the rules in the NPMP		Number of non-compliance events by type Narrative of follow up action taken and result
The level of awareness of *M. bovis* and reporting obligations by those subject to the NPMP	Develop baseline of awareness by 30 June 2025.	Report survey awareness metrics. Then ongoing awareness metrics periodically until June 2028
The completeness and accuracy of tracing data and the ability to quickly trace risk events and animals*.		Metrics supplied by NAIT ltd. Accompanied by epidemiological commentary around what this means for tracing infection
The time that farms are under the active management of MBfree		
• Time under Movement Control NOD by type:	• BTM detect: 90% under NOD for ≤21 days • Beef detect: 90% under NOD for ≤60 days • Trace NOD: 80% ≤ 60 days OR 90% ≤90 days	By variance
The time taken to process compensation claims	Claims within Chief Executive's Delegated Financial Authority processed by OSPRI within 5 business days of receiving MPI recommendation	By variance

^ *These have been modelled to achieve the eradication goal and form our forward surveillance plan.*

* *In the absence of tracing active infection, national NAIT data accuracy and completeness metrics used to demonstrate traceability.*

5. Risks to NPMP Objective

The top two risks to achieving the NPMP's objective are:

1. Uncontrolled spread of *M. bovis*

It is estimated that four years of continuous background surveillance must elapse from the critical date to achieve the required level of CoA. The closer to 30 June 2028, the more impact any new infected farm can have on the programme's ability to reach the required level in the available time.

If more recent farm-to-farm transmission is confirmed since the existing critical date, a new critical date will be set, and background surveillance will start from day one to work again towards the 95% confidence target. If infection is confirmed and it can be shown with network surveillance and any available genomics that infection is historic and isolated to that individual farm, this may not have an impact on the critical date.

Risk mitigations include:

- The case review project and follow up network assurance activities:
  - The case review project was a desktop review of former confirmed infected properties. Case review identified potential avenues of undetected infection which are addressed with actions such as on-farm sampling. These actions provide assurance that infection is not present in the network of farms associated with confirmed infected properties ('network assurance activities').
  - Network assurance activities are an opportunity to rule out infection in the areas of most risk. Negative results from network assurance activities indicate a low likelihood of undetected infection.
- Bulk tank milk surveillance:
  - Bulk tank milk surveillance finds infection in dairies across the country and is a useful early detection tool.
- National Beef Cattle Surveillance:
  - National Beef Cattle Surveillance gathers negative surveillance data rather than for case finding. Analyses including those that identify High-Risk Businesses may identify surveillance gaps that could be addressed with on-farm sampling.

2. Reintroduction of *M. bovis* from an international source

The risk of *M. bovis* entering New Zealand and spreading is very low but not zero. Imported bovine semen is the most likely pathway for the incursion of ST-29 detected in 2022.

Under the agreement between the funders of the NPMP, if an event occurs which has the potential to change the implementation of the NPMP, substantially change *M. bovis* disease management risks or activity, such as the identification of a new strain, the parties can initiate formal consultation to consider the implications of and aim to address risks and resolve issues concerning the implementation of the NPMP, the funding, change in disease prevalence, or any other change in circumstances.

Current mitigations to reduce the likelihood and/or impact of an additional incursion include:

- *M. bovis* specific requirements that must be met for imports of bovine semen into New Zealand as prescribed in the Bovine Germplasm Import Health Standard (25 August 2021)[12]
- An MPI-led semen testing project that tested non-Certified Semen Services treated batches of semen imported into New Zealand prior to the Import Health Standard that came into force in August 2021. The testing was designed to bring stored semen up to the same standard as the current Import Health Standard.

12 Bovine Germplasm Import Health Standard (25 August 2021)

- Ongoing bulk tank milk surveillance which has demonstrated its ability to detect incursions of *M. bovis* into dairy farms.
- Development of an OSPRI-led research project designed to understand and potentially mitigate the impacts of a new incursion, for example through imported semen.

In addition to these top two risks, emerging risks will be managed using MBfree's Risk Management Framework and communicated to Partners as part of regular reporting.

The achievement of NPMP objectives is also dependent on the validity of a number of assumptions, including, but not limited to, MBfree having continued access to:

- Suitable CTO approved tests and diagnostic laboratories.
- Suitable data management system.
- Sufficient funding.

The validity of these assumptions will be regularly reviewed as part of MBfree's Risk Management Framework.

PART 2 – OPERATIONAL POLICIES

How the operational policies apply

The operational policies provide information on the underpinning tools needed to deliver the disease management approach for *M. bovis*. They set out the policy intent, how they are intended to be implemented, specifications for the actions taken to apply the policy, information needs, and the regulatory basis of the policy.

They are both standalone to support a particular activity (e.g. sampling) but can also be applied in combination to support delivery of broader disease management and surveillance objectives.

Use of Biosecurity Act powers and NPMP rules

The operational policies set out in this NOP are implemented using a combination of certain powers granted to MBfree as the management agency and Authorised Persons under the Act, and rules contained in the NPMP.

Biosecurity Act powers

The NPMP refers to specific powers under the Act that may be used to implement the NPMP.

Management agency powers

Under clause 15 of the NPMP, the management agency may exercise all or any of the powers specified in the following sections of the Act to implement this NPMP: Table 4 summarises these powers as specified under the NPMP and reasons why and when they may be applied:

Table 4: *Biosecurity Act powers of the management agency specified under the NPMP and potential use*

SECTION	POWER	REASON WHY THE POWER MAY BE NEEDED
128	Power to act on default	To enable MBfree to act where a notice of direction has not been complied with, and to either implement the directions and to recover the costs and expenses reasonably incurred in doing so.
131	Declaration of controlled area	To enable MBfree to institute area-wide movement and other controls, if required, to limit the spread of *M. bovis.*
135	Options for cost recovery	To enable MBfree to recover costs (e.g., where an owner or occupier responsible for a place fails to cooperate and comply with a notice of direction).
136	Failure to pay	To enable MBfree to recover unpaid costs being recovered under section 135.

Authorised person powers

Under clause 14 an authorised person appointed under section 103 of the Act for the purposes of the NPMP may exercise all or any of the specified powers to implement the NPMP. Table 5 summarises these powers as specified under the NPMP and reasons why and when they may be applied:

Table 5: *Biosecurity Act powers of authorised persons specified under the NPMP and potential use*

SECTION	POWER	REASON WHY THE POWER MAY BE NEEDED
106	Power to require assistance	An 'authorised person' can seek or require assistance from any person when required.
109	Power of inspection	To carry out inspection for the purpose of confirming presence, former presence, or absence of, *M. bovis*, for locally eradicating or managing *M. bovis*, or for determining whether or not any person is complying with biosecurity law[13].
111	Power of entry in respect of offences	This section authorises an inspector or authorised person to apply for a warrant to investigate potential offences where all reasonable efforts to achieve cooperation have been exhausted.
113	Power to record information	To enable recording or gathering of information when powers under sections 109 or 111 are used.
114	General powers	Where powers of inspection or entry under sections 109 and 111 have been used, this section enables action to be taken to manage any risks that could lead to further spread of *M. bovis.*
115	Use of dogs and devices	To enable any person exercising any of the powers above, or under s 120, to be accompanied by a dog or use devices to assist the use of these powers.
118	Power to seize evidence	To enable evidence to be collected when powers of entry have been granted under section 111.
119	Power to seize abandoned goods	To enable seizure, treatment, or disposal of any abandoned means of transportation or goods that may contain or harbour *M. bovis.*
120	Power to intercept risk goods	To enable anything (e.g., vehicle or container) that contains or is likely to contain a risk good (e.g. *M. bovis*) to be stopped, and to be opened and inspected for the presence of risk goods when a restricted place notice under section 130 or a declaration of a movement control area under 131 have been breached.
121	Power to examine organisms	To enable the examination of organisms or goods for a range of purposes including to: • Confirm the presence or absence of *M. bovis*. • Confirm a diagnosis of *M. bovis*. • Or make an assessment of measures taken to eradicate *M. bovis*.
121A	Power to apply article or substance to place	To enable equipment or a substance to be left on a farm, or other site, in order to collect information about the presence of *M. bovis*
122	Power to give directions	To enable an authorised person to give directions, including to take steps to prevent the spread of *M. bovis*, or to comply with the NPMP rules
123	Power to vaccinate, etc	To enable an authorised person to vaccinate, medicate, or otherwise treat cattle for *M. bovis*.
130	Declaration of restricted place	To enable an authorised person to restrict movements of organisms, organic material or goods into or out of a place, where they believe or suspect on reasonable grounds that *M. bovis* is or has been in a place.

13 Section 2 of the Act defines biosecurity law as the Act and regulations made under it, instruments made under Part 5 of the Act, and anything done under the Act, either generally or specifically to a person.

NPMP Rules

The NPMP Rules[14] set out the obligations that parties subject to the NPMP (e.g. farmers, veterinarians, diagnostic laboratories, raw milk transporters) are required to meet in respect of the management of *M. bovis*. The Rules cover:

- Rules 1 - 5: Tracing records, declarations, and information.
- Rules 6 - 12: Sampling and testing.
- Rules 13 - 15: Facilities, assistance and identifiers.
- Rules 16 - 17: Isolation of cattle and risk goods.
- Rules 18 - 19: Cattle farming businesses that are high-risk businesses.
- Rules 20 - 21: Commercial slaughter businesses.
- Rule 22: Approvals to vaccinate, medicate or treat cattle.
- Rule 23: Provision of information to the management agency (MBfree).

How powers are applied

MBfree will predominantly rely on compliance with obligations to support programme delivery so the intention is that powers under the Act will only be used where:

- The Rules in the NPMP do not provide MBfree with authority to take action to manage the disease (e.g. depopulation, establish movement controls).
- A Person in charge of cattle (PICC) has refused to assist with sampling or other disease surveillance and management activities, or
- It is considered that the use of powers is necessary to ensure compliance with any of the NPMP Rules.
- The issue of any direction or notice will be according to written protocols approved by MBfree.

Implications of not complying with directions and/or Rules

Under the Act:

- Failure to comply with directions issued under section 121 of the Act constitutes an offence.
- Interference with or movement of an article or substance brought not or left in place under s121A constitutes an offence.
- Failure to comply with a notice of direction under section 122 may result in a penalty.
- Failure to comply with a declaration of restricted place notice under section 130 may result in a penalty.

14 Ibid. Schedule 2.

Under the NPMP, failure to comply with the following Rules constitutes an offence under section 154N(18) of the Act, unless an exception applies:

- Rule 4: Transporters of raw milk for cattle feed to provide tracing information on delivery.
- Rule 5: People who take delivery of raw milk for cattle feed to keep tracing information.
- Rules 6 - 12: Sampling and testing.
- Rules 13 - 15: Facilities, assistance and identifiers.
- Rules 16 - 17: Isolation of cattle and risk goods.
- Rule 18: Audit and surveillance testing, etc, for high-risk business.
- Rules 20 - 21: Commercial slaughter businesses.
- Rule 22: Approvals to vaccinate, medicate or treat cattle.
- Rule 23: Provision of information to the management agency (MBfree).

Operational Policy 15 provides further information on MBfree's compliance policy.

Failure to comply may also impact the reimbursement of costs associated with complying with MBfree's directions and/or eligibility for compensation (please refer to Operational Policy 17 for further information on MBfree's reimbursement of costs policy).

1. Cattle Classifications

Policy	To effectively manage the eradication of *M. bovis*, individual and Management Groups of cattle will be classified according to *M. bovis* infection risk.
Implementation Statement	The following classifications may be applied for individual cattle: • Cattle of interest. • In-contact cattle. • Trace-forward cattle. The following classifications may be applied for management groups of cattle: • Management group of interest. • Stock class of Interest.
SPECIFICATIONS	
Classification of Cattle	**Cattle of interest** Cattle that are associated with a Risk Event and may require sampling to determine whether infection is present. This includes: • Cattle that moved off a Confirmed Property or a Network Linked Property during the active surveillance period. • Trace-forward cattle that are contributing to Bulk Tank Milk screening. • Cattle that moved onto a Confirmed Property or a Network Linked Property (NLP) during the infection risk period. • Cattle that moved off a property in proximity to a Confirmed Property or NLP during the infection risk period. **In-contact cattle** Cattle that have had close contact with trace-forward cattle, trace-back cattle, or cattle that were in a property in proximity to a Confirmed Property or NLP during the infection risk period, or have ingested milk sourced from a Confirmed Property during its infection risk period. **Trace-forward cattle (high-risk)** Cattle that moved from a Confirmed Property or a Network Linked Property during the infection risk period.
Classification of groups of Cattle	**Management Group of Interest** A management group of cattle that is associated with a risk event and requires sampling to determine whether infection is present. **Stock Class of Interest** Stock classes present on a property that are not associated with a risk event but that require testing under Programme specifications. These can include dairy replacement cattle and beef breeding cattle.

2. Risk ratings – Cattle and Risk Goods

Policy	Cattle and Risk Goods are ranked to reflect their likelihood of transmitting *M. bovis*. The ratings are determined via the review of available scientific evidence and will be updated if new evidence about the transmission of *M. bovis* infection becomes available.
Implementation Statement	The risk ratings of cattle and/or risk goods determine whether they will be permitted to move off a property and under what circumstances, and when applicable, what cleaning, disinfection, and stand-down is required.

Table 6: *Risk ratings for cattle and goods ranked by relative M. bovis transmission risk*

EXTREMELY HIGH	VERY HIGH	HIGH	MEDIUM	LOW	VERY LOW	EXTREMELY LOW
RISK RATING: 7	**RISK RATING: 6**	**RISK RATING: 5**	**RISK RATING: 4**	**RISK RATING: 3**	**RISK RATING: 2**	**RISK RATING: 1**
Live cattle (members of the subfamily Bovinae). Cattle milk and milk products produced on farm not destined for commercial pasteurisation.[15]	None[16]	None[16]	Equipment or material from/within cattle milking or milk handling environments.[17, 18]	Equipment or material in direct contact with live cattle outside cattle milking or milk handling environments.[17, 19] Cattle genetic material, including semen and embryos.	Feed/water troughs outside cattle milking or milk handling environments. Vehicles and machinery that have had direct contact with cattle. Cattle handling yards outside of cattle milking or milk handling environment. Personal protective equipment used as part of cleaning and disinfection processes. Cattle carcasses, slinks, by-products and equipment or anything in direct contact with carcasses or by-products.	Water outside of cattle milking or milk handling environment.[17, 20] Unused stored feed.[21] Manure/effluent/soil.[22] Bedding outside of cattle milking or milk handling environment. Grazing areas.[23] Driveways, laneways and thoroughfares used for cattle and or vehicles. Farm equipment and vehicles that have not had direct contact with cattle, cattle milking or milk handling environments. Diagnostic samples being sent directly to a laboratory. Live animal species apart from cattle.

15 Includes any milk produced and pasteurised on-farm and discard milk.
16 No items in the risk rating categories 5 or 6 are recognised in *M. bovis* control.
17 Examples of milking or milk handling environments include milking sheds, calf rearing pens, in-milk cow holding pens and similar.
18 Examples of equipment or material include milking cups, milking aprons, gloves, bedding from a cattle milking or milk handling environment, etc. Effluent/manure is not included in this definition.
19 Examples of equipment or material include artificial insemination equipment, calving-related equipment, nose grips, veterinary equipment that contacts cattle, drench guns and gloves.
20 Includes water in troughs, dams, rivers, streams, etc.
21 Includes hay and silage.
22 Includes effluent tanks, effluent ponds, areas irrigated by effluent, manure stacks.
23 Includes pastures, improved pastures, and areas used for cropping and silage production.

3. Risk Event Classifications

Policy

Records of disease transmission risk, known as risk events, are created against a property when it is determined, via network or background surveillance, that there is an increased risk of *M. bovis* infection on that property.

Implementation Statement

Risk events are classified as high or low risk as per Table 7. Risk event classification will inform whether movement restrictions are considered necessary to prevent transmission of *M. bovis* whilst infection status is determined through sampling and testing.

Table 7: *Risk Event Classification*

HIGH RISK	LOW RISK
Presence of high-risk trace-forward cattle (i.e., cattle that were likely present on a Confirmed Property during its infection risk period that have never contributed to the commercial milk supply) that moved off a Confirmed Property during its infection risk period.	Presence of cattle of interest (based on perceived likelihood of infection prior to sampling and testing or contribution to the commercial milk supply) that moved off a Confirmed Property during its infection risk period or during the buffer period.
High-risk trace-forward cattle from a Confirmed Property were previously present but have subsequently moved to a different location (Step-through).	Cattle of interest from a Confirmed Property were previously present but have subsequently moved to a different location (Step-through).
Movement of high-risk goods (namely unpasteurized milk) from a Confirmed Property during its infection risk period.	Property supplied cattle to a Confirmed Property that moved onto the Confirmed Property during its infection risk period or during the buffer period (Back trace).
Another property operated by the same PICA of a Confirmed Property with evidence of receipt or supply of high-risk cattle or goods (Owner-Other).	Another property operated by the same PICA with no evidence of receipt or supply of high-risk cattle or goods (Owner-Other).
High-risk background surveillance detect.	Low-risk background surveillance detect.
Positive commercial PCR testing.	A neighbouring property that shares a boundary with a Confirmed Property (Proximity) without evidence of live cattle movement(s) between the properties.
	Presence of any goods considered risk rating 2, 3 and 4 that have come from a Confirmed Property.
	Presence of imported cattle.
	Report case.

4. Network Surveillance

Policy	Network Surveillance encompasses the identification of risk, assessment of that risk, and risk-based sampling and testing to determine *M. bovis* infection status of properties.
Implementation Statement	Network Surveillance involves: • Reviewing data sources to trace cattle and risk goods that are linked to Confirmed Properties and Network Linked Properties. • Sampling and testing of cattle as appropriate on properties with active risk events. Sampling is completed in accordance with MBfree's Cattle Sampling Policy. Testing is completed in accordance with the Approved Diagnostic Laboratory Policy.
SPECIFICATIONS	
Exotic Disease Investigation Report (EDIR)	An EDIR is completed by a veterinarian for all Confirmed Properties and Network Linked Properties. Information is gathered about farm management practices and movements of cattle and risk goods are assessed to determine the risk of infection spread across the property or between other properties.
Identification of Risk Events	All Confirmed Properties and Network Linked Properties will be assessed to identify Risk Events that may have transmitted *M. bovis* infection. These Risk Events may include: • Movements of cattle and risk goods including raw milk. • Proximity risk. • Shared ownership and/or management. Data sources include NAIT, Animal Status Declarations (ASDs), raw milk records, farm records, census records, EDIRs, and maps. Risk Events are classified as high or low risk which informs the sampling requirements and if movement restrictions are necessary (see risk event classification policy).
Assessment and Validation of Risk Events	Risk events will be assessed to determine the likelihood of *M. bovis* infection on that Place. When necessary, information related to the risk event will be validated with the PICC before any further action is taken.
Supporting Resources	Farmer information packs. The NAIT programme. ASD requirements.

5. Background Surveillance

Policy	Background Surveillance is carried out to screen the national cattle herd for the presence or absence of *M. bovis* infection outside of Network Surveillance activities. From the critical date, Background Surveillance contributes to evidence of *M. bovis* absence in New Zealand.
Implementation Statement	Background Surveillance includes the following: • Bulk Tank Milk (BTM) surveillance. • National Beef Cattle Surveillance (NBCS). • Report Case Surveillance. Sampling is completed in accordance with the Cattle Sampling Policy. Testing is completed in accordance with the Approved diagnostic testing and reporting Policy.
SPECIFICATIONS	
Bulk Tank Milk Surveillance	Bulk Tank Milk Surveillance includes testing of bulk tank milk samples from dairy farms. Bulk tank milk samples are tested at an approved diagnostic laboratory. Bulk tank milk testing is used as a screening tool, not a confirmatory test.
Beef and Drystock Cattle Surveillance	National Beef Cattle Surveillance consists of the three streams: • The On-farm beef and drystock surveillance (BBS) stream targets beef breeding herds, dairy heifers and other stock classes of interest. Sampling of these cattle is aligned with routine management practices to reduce impacts on animal welfare and farm management. • The Meat Processing Plant Surveillance (MPPS) stream involves sampling beef cattle presented for slaughter at meat processing plants to screen for *M. bovis* infection. Involvement in this stream is an obligation under the NPMP for any meat processing plant. • The Pre-arrival sampling stream involves sampling beef cattle prior to entering specific properties to screen for *M. bovis* infection in the supplying properties.
Report Case Surveillance	Report Case Surveillance is a passive surveillance stream that provides a facility for concerned vets, farmers, laboratories and members of the public to report suspected cases of *M. bovis* based on observed clinical signs and/or positive commercial test results. Report Cases are referred directly to MBfree, or indirectly via the MPI exotic pest and disease hotline, and are assessed for the likelihood of *M. bovis* infection. Where appropriate, samples are taken for testing at an approved laboratory.
Supporting resources	Farmer information packs. *M. bovis* National Beef Cattle Surveillance - information for farmers. *M. bovis* National Beef Cattle Surveillance - information for veterinarians. About Bulk Tank Milk (BTM) screening. BTM indicative poster process for farmers.

6. Sampling

Policy	Sampling of cattle and cattle products, testing and interpretation of results is completed as part of network and background surveillance.
Implementation Statement	Sampling of cattle may occur on-farm or at slaughter through a processing plant. Sampling is completed in accordance with the Sampling Protocol – an internally held technical document that is epidemiologically driven and is reviewed and updated regularly to ensure our protocols reflect the current disease context, including prevalence. This underpins all farmer facing documents and information packs. Other sampling is completed in accordance with protocols approved by MBfree. Testing is completed in accordance with the Approved diagnostic testing and reporting policy. Test results are interpreted in accordance with protocols approved by MBfree.
SPECIFICATIONS	
Sampling Protocol	The type and number of samples collected will depend on which surveillance stream that sampling is being completed for and will follow the Sampling Protocol. This may include blood, milk, germplasm, tonsillar and nasal swabs. For **network surveillance**, the Risk Event will inform what type of sampling is required to determine infection status (refer to sampling protocol). This may be a combination of on-farm blood/nasal swab sampling and blood/tonsillar swab sampling at slaughter. Slaughter sampling may be used to obtain samples that cannot be obtained safely through on-farm sampling. For **BTM surveillance**, screening is performed on bulk tank milk samples routinely collected for composition and component testing. **NBCS**, blood samples are collected either on-farm (BBS & Pre-arrival) or at slaughter (MPPS). **Report case** sampling will depend on clinical signs and result of OSPRI veterinarian assessment. **Depopulation** sampling includes collecting tonsillar swabs for culture and to produce isolates in genetic sequencing. Blood samples are also collected for analytical use as paired samples to better understand the organism and Programme testing. **Repopulation** sampling is intended to provide an added level of assurance that depopulated properties are not repopulated with *M. bovis*-infected cattle. Repopulation sampling is precautionary and is not used to determine infection status.
Supporting resources	Farmer information packs. BTM indicative poster process for farmers.

7. Approved diagnostic testing and reporting

Policy	Both the diagnostic tests applied, and the diagnostic laboratories applying these tests as part of MBfree surveillance activities must be approved by the MPI CTO. The appropriate person must ensure that test results (whether negative, positive or inconclusive) are reported to MBfree.
Implementation Statement	**Programme surveillance testing** The MPI CTO approved tests and approved diagnostic laboratories are published on the MPI website. The following diagnostic tests are applied for detection of *M. bovis*: • The ID Screen® *M. bovis* Indirect Enzyme-linked immunosorbent assay (ELISA) – referred to as the IDVet ELISA. • Thermofisher VetMAX *M. bovis* real-time PCR kit. Testing specifications and laboratory protocols must be adhered to and any variations must be approved by MBfree. Test results must be reported in the format, frequency, and timeframe outlined in the contractual agreements with MBfree. **Commercial testing** MBfree approves the application of tests and diagnostic laboratories for commercial *M. bovis* testing purposes (outside programme surveillance activities) under the following conditions: • Positive *M. bovis* results must be reported within 24 hours to MBfree for follow up investigation (see report case section of the background surveillance policy); and • Negative results are reported to MBfree on a routine basis in accordance with the approval granted.
SPECIFICATIONS	
ELISA testing	ELISA testing is performed on blood samples collected from cattle either on-farm or at the time of slaughter and on bulk tank milk samples collected for screening of dairy herds. Processing blood and milk samples for testing with the IDVet ELISA must adhere to laboratory protocols that are approved by MBfree. The IDVet ELISA is a test that detects levels of antibodies to *M. bovis* in the blood or milk samples. It is applied as both a herd-level test and screening tool by MBfree. Sampling and testing protocols have been designed based on the performance of the IDVet ELISA kit and must be followed. Interpretation of ELISA test results must follow protocols and thresholds set by MBfree. Reporting of ELISA test results must be in the approved manner by MBfree.

Molecular assay (PCR testing & Genomics)	**Polymerase Chain Reaction (PCR)** Polymerase Chain Reaction (PCR) testing is performed on any samples apart from blood. Sample types include but are not limited to nasal swabs and tonsillar crypt swabs collected from cattle on-farm or at a processing plant. Processing samples for testing via PCR must adhere to laboratory protocols approved by MBfree. This test is used to determine the presence of *M. bovis* genetic material. Interpretation of PCR test results must follow protocols set by MBfree. Reporting of PCR test results must be in the approved manner by MBfree. **Genomics** An attempt is made to grow *M. bovis* bacterial isolates from positive PCR samples. If successful, a whole genomic sequence is generated and analysed. Whole genome sequencing and phylodynamic models are important to identify new strains and to support source attribution for infections caused by the original incursion strain. The results of genomic analyses cannot be interpreted in isolation; their explanatory power comes when combined with tracing and other case information.
Supporting resources	CTO approved tests and laboratories published under Long-term biosecurity management programmes on the Ministry for Primary Industries website. MBfree approved forms of reporting published on the OSPRI website.

8. Raw milk for cattle feed

Policy	Anyone who transports raw milk from a farm dairy to another place, where it is to be used for cattle feed, must provide the receiver of the milk with unique identifying information. The information will allow for the movement of the raw milk to be traced if it was suspected to be infected with *M. bovis*. Information is collected to allow identification of, either directly or indirectly, • Where the milk came from (farm dairy). • The driver and vehicle that transported the milk. • The time and date of the delivery. • The total volume of milk delivered. If the transporter is moving the milk for an operator, such as a dairy processor, it is the dairy processor's responsibility to ensure that the information is collected. A person must only take delivery of raw milk for the purpose of cattle feed if they are provided with the unique identifying information outlined above. This information must be retained for 4 years after receipt of the raw milk. The recipient must be able to provide this information if requested by MBfree.
Implementation statement	Unique identifying information needs to be collected from suppliers and transporters, or dairy processors, to be able to trace where raw milk has come from once the recipient has received it. There are two options, dependent on the nature of transfer, to meet this obligation. **Farmer-to-farmer transfer** i.e. raw milk is transported from a farm dairy to another place for use as cattle feed. • The supplier of the raw milk will add their unique identifier (see definitions section in this operational policy) to a template (published on the MBfree website), or other suitable form such as an invoice or sale record, and give this to the driver upon milk collection. The driver will add their unique identifier to the form and provide the completed document to the recipient to store in their records. This could be: – Hard copy at time of delivery AND/OR – Electronically within 24 hours of delivery. **Dairy processors** i.e. where collected raw milk from a farm dairy is designated unsuitable for processing and is sent for use as cattle feed. • The recipient of raw milk for cattle feed will receive unique identifier information either: – Hard copy at time of delivery AND/OR – Electronically within 24 hours of delivery. • The dairy processor must maintain all records and the ability to trace back to originating farms on request when provided with unique identifier information.

Definitions	**Unique identifier**: the minimum information that would allow traceback of all raw milk to the originating farm. • **For farmer-to-farmer transfer this includes:** – Unique farm identifier of the supplier » Farm name and address » OR dairy supply number and company code » OR NAIT number – Unique driver identifier » The name of the driver AND the relevant business name of the entity for which the work is carried out, AND › the run number allocated for the transportation and delivery (if applicable), OR › identifying particulars of the vehicle (e.g. licence plate, registration, or asset number) • **For dairy processors this includes:** – Name of the dairy processor – Date and time – Tanker number – Run number **Hardcopy**: identifier information was provided at time of delivery in paper format. **Electronic**: identifier information to be provided by digital transfer within 24 hours of delivery to the recipient.

9. Movement Restrictions under s122

Policy	Movement restrictions may be issued for properties considered to be high risk in order to prevent the potential spread of *M. bovis* until the infection status has been determined.
Implementation Statement	Legal notices restricting movements of cattle and risk goods are issued to a PICC or property owner when the inspector or Authorised Person determines the property is at increased risk of *M. bovis* infection. Movement restrictions will be issued as soon as practicable after identifying a property as high risk and will remain in place until the investigation has been completed, the infection status of the property has been determined, and the property does not present a risk of infection to others. Movement restrictions can be issued across multiple Places if they are associated with the same risk event(s) and are considered to have the same *M. bovis* infection risk.
SPECIFICATIONS	
Movement Control Notice of direction (NOD)	Movement Control NODs under s122 of the Act are used to restrict the movement of cattle and risk goods off a place. The legal notice applies to a geographic boundary based on the property's legal boundary and/or farming operation.
Transition NOD (TNOD)	TNODs under s122 of the Act are used to restrict the movement of cattle and risk goods both onto and off a place. These may be issued where sampling and testing of cattle indicates the property has met or is likely to meet the case definition. In addition to restricting movements off the property, cattle are prevented from entering the property, therefore limiting the potential propagation of infection. The legal notice applies to a geographic boundary based on the property's legal boundary and/or farming operation. The TNOD provides MBfree the opportunity to complete further investigation (census, EDIR, additional sampling, etc.) and to determine the extent of *M. bovis* infection on the property which informs the placement of the restricted place notice (see Movement Restrictions under s130 policy).
Revocation	Revocation of the movement restriction legal notice will be considered once the sampling protocol and any other necessary activities have been completed and the infection status has been determined. The following criteria must be considered: • Trace-Forward cattle must be removed from the property. • Sampling has been completed in accordance with the Sampling Protocol. • *M. bovis* test results are negative as per the Sampling Protocol. • If required, a census has been completed and reviewed as per the census policy. • If required, Cleaning and Disinfection has been completed. In situations where test results indicate that *M. bovis* infection is likely to be present on a property, the movement restriction NOD may be revoked and replaced by a legal notice with a higher level of controls.
Amendments	Movement Control NODs and TNODs may be amended to include or exclude land or cattle in accordance with MBfree specifications and procedures.

Permitting	Removal of cattle and/or risk goods from properties under movement restrictions requires the permission of an Authorised Person under section 122 of the Act. Permit requests are assessed based on the risk associated with the proposed movement. Consideration is given to both the type and source of cattle/risk goods. Movement permit conditions and the duration of the permitted activity are stipulated in the legal instrument issued by an Authorised Person.
Supporting Resources	Farmer information packs.

10. Movement Restrictions under s130

Policy	Movement restrictions may be issued for properties confirmed to be infected with *M. bovis* to prevent the potential spread of infection and will remain in place until the property has been cleared.
Implementation Statement	Legal notices restricting the movement of cattle and risk goods are placed on a property, or part of a property, that contains cattle that an Authorised Person believes or suspects on reasonable grounds have *M. bovis* infection. The legal notice will be issued as soon as practicable after a property has met case definition and will remain in place until the property has been cleared of infection through depopulation and cleaning & disinfection (C&D) and no longer represents a risk of infection to cattle. Movement restrictions can be issued across multiple Places if they are associated with the same risk event(s) and are considered to have the same *M. bovis* infection risk.
SPECIFICATIONS	
Restricted Place (RP) Notice	Restricted Place notices issued under section 130 of the Act are used to restrict the movement of cattle and risk goods on and off the property to prevent the spread of *M. bovis* infection. The RP notice is issued to the occupier of the property, but that person has the obligation to inform any persons in charge of cattle subject to the RP notice. The RP notice must include all parts of the property that contain management group(s) that meet the case definition, and all cattle that have or have had direct close contact with those management group(s) during their infection risk period. The boundary is drawn based on test results and information gathered while a property is subject to a TNOD. All neighbours with cattle must be informed of the restricted place notice within the timeframe specified by MBfree. This can be completed by the restricted place owner/occupier/PICC or by MBfree. Restricted place signage must be clearly visible at all entry points to the restricted place to ensure visitors are aware and follow necessary biosecurity procedures.
Revocation	Restricted Places may be revoked under section 133 of the Act once the following criteria have been met: 1. All management groups that have met the case definition and all cattle at high risk of infection have been removed; and 2. All required cleaning, disinfection, and stand-down has been completed on items and areas used by all management groups that have met the case definition and all cattle at high risk of infection. 3. The programme is satisfied that the property no longer presents an infection risk.
Amendments	RP notices may be amended to include or exclude land in accordance with MBfree specifications and procedures
Permitting	Removal of cattle and/or risk goods from Restricted Places requires the permission of an Authorised Person under section 130 of the Act. Permit requests are assessed based on the risk associated with the proposed movement. Consideration is given to both the type and source of cattle/risk goods. Movement permit conditions and the duration of the permitted activity are stipulated in the legal instrument issued by an Authorised Person.
Supporting Resources	Farmer information packs.

11. Census

Policy	The identification and headcount of all cattle present on a Place may be required to collect and validate cattle identification records.
Implementation Statement	MBfree may require a census to be completed to confirm animals on a property. An Authorised Person will issue a written direction under rule 14 or a legal Notice of Direction using powers under section 121 under the Act. All cattle on the property are identified by scanning their NAIT approved RFID tag and management group composition is recorded. Data from the census records are reviewed against NAIT and tracing records to ascertain the presence or absence of cattle linked to the known infection network. If risk is identified, additional sampling may be required in accordance with the sampling protocol.
SPECIFICATIONS	
	The purpose of conducting a census is to: • Confirm the number and type of cattle present on farm and management group composition. • Confirm the absence/presence of trace-forward cattle or cattle of interest. • Inform sampling plans that are critical to determining the infection status of the property. • Assist with tracing and confirming the origin of cattle on the property. • Provide farmers with accurate and up-to-date information about the cattle on their property. • Inform the depopulation plan for a Confirmed Property. • Assist with compensation forecasting. The census requirement applies to cattle within a geographic boundary based on the property's legal boundary and/or farming operation and it must be completed within the timeframe directed by the Authorised Person. Support may be provided to assist with mustering and presenting cattle for the census (see Reimbursement of Costs policy). In exceptional circumstances farm records may be used in lieu of a census.
Supporting Resources	Farmer information packs.

12. Depopulation

Policy	Depopulation is a measure used to eradicate *M. bovis* where there are reasonable grounds to believe that cattle harbour the organism and therefore it is necessary that they be destroyed.
Implementation Statement	A legal notice may be issued under section 122 of the Act for the purpose of directing the destruction of cattle if there are reasonable grounds to believe that those cattle harbour *M. bovis*.
SPECIFICATIONS	
Depopulation Requirements	The NOD to depopulate will apply to management group(s) that have met case definition, and all cattle that have or have had direct close contact with those management group(s) during their infection risk period. An assessment will be made on each Confirmed Property to determine how, where and when depopulation will occur. Depopulation will take place at a meat or petfood processing plant in accordance with MBfree's protocols. In exceptional circumstances, alternative locations and options for depopulation will be considered.
Timeframes	MBfree requires that depopulation occurs as expeditiously as possible after the NOD to Depopulate has been issued. In certain circumstances, depopulation may be phased or delayed to allow for the farm business to mitigate losses and minimise the impacts associated with immediate depopulation. Strict criteria regarding biosecurity practices, feed availability and human and animal welfare must be met before phased or delayed depopulation will be considered.
Supporting Resources	Farmer information packs.

13. Cleaning, disinfection, and stand-down

Policy

Cleaning, disinfection, and stand-down (or a combination of the three), is the process of removing contamination and reducing the number of *M. bovis* organisms to an acceptable level.

The requirement for cleaning, disinfection and/or stand-down is determined by the risk rating associated with the goods or areas.

Implementation Statement

A legal notice may be issued under section 122 of the Act to direct decontamination of goods and areas on a high-risk property or a confirmed property.

The decontamination requirements (via a combination of cleaning, disinfection and stand-down) are outlined in a site-specific Cleaning and Disinfection Plan.

Persons completing cleaning and disinfection activities must be approved to do so by MBfree and adhere to the requirements outlined in the Cleaning and Disinfection protocols.

SPECIFICATIONS

Table 8: *Risk Ratings and related requirements of cleaning, disinfection, and stand down.*

RISK RATING	UNKNOWN INFECTION STATUS	CONFIRMED INFECTION STATUS
7: Extremely High	Cannot be managed by C&D	Cannot be managed by C&D
6: Very High	No facilities or goods are currently in this risk level	No facilities or goods are currently in this risk level
5: High	No facilities or goods are currently in this risk level	No facilities or goods are currently in this risk level
4: Medium	1. Cleaning 2. Disinfection 3. Stand Down	1. Cleaning 2. Disinfection 3. Stand Down
3: Low	1. Cleaning 2. Disinfection AND/OR 3. Stand Down	1. Cleaning 2. Disinfection AND/OR 3. Stand Down
2: Very Low	1. Cleaning 2. Disinfection OR 3. Stand Down	1. Cleaning 2. Disinfection OR 3. Stand Down
1: Extremely Low	No C&D	No C&D

Cleaning and disinfection Principles	• Cleaning and Disinfection can occur during the stand-down period. • Cattle must not be present on an area that contains Risk Goods that are undergoing Cleaning and Disinfection. • The Cleaning and Disinfection Standard specifies the protocol for Risk Goods that require Cleaning and Disinfection. • Persons carrying out Cleaning and Disinfection are required to use chemicals and detergents as approved by MBfree. • Each property undergoing Cleaning and Disinfection must have a specific Cleaning and Disinfection Plan and a Health and Safety Plan that are reviewed and approved before commencing Cleaning and Disinfection. These plans set out the requirements that must be met in the process of Cleaning and Disinfection. • All Cleaning and Disinfection should be undertaken in accordance with regulated product label requirements. • Risk Goods associated with milk handling environments must be cleaned and disinfected using the approved dairy cleaning/sanitation compounds specified in the Cleaning and Disinfection Standards. • Risk Goods outside of milk handling environments may be cleaned and disinfected using either the approved dairy or non-dairy compounds. • Persons carrying out Cleaning and Disinfection must have completed sufficient training and be deemed competent by MBfree to complete Cleaning and Disinfection. • Cleaning and Disinfection will not be undertaken in the absence of a legal notice directing such activities.
Cleaning	Cleaning must be conducted to the standard specified in the Cleaning and Disinfection Standards.
Disinfection	Persons carrying out Disinfection are required to use methods and disinfectants included in the Cleaning and Disinfection Standards. The concentration of disinfectants used should allow for any potential dilution of the disinfectant by residual cleaning water if the Risk Good is not dried prior to application of the disinfectant. Disinfectants must be applied to cover all surfaces of Risk Goods and remain on the Risk Goods for the required contact time.
Stand-down	The stand-down period is 60 days. The stand-period begins the day after the last cattle have been removed from the relevant area. Stand-down is an exclusion period during which cattle cannot come into contact with the relevant areas or goods.
Supporting Resources	Farmer information packs.

14. High-risk businesses

Policy	MBfree may classify a farming enterprise as a High-Risk Business and may require the implementation and audit of risk management practices. It may also give direction for any cattle managed within, or entering, a High-Risk Business, to be tested for *M. bovis*.
Implementation Statement	The MBfree may classify a farming enterprise as a High-Risk Business when: • There is a high risk that cattle located within the enterprise will become infected with *M. bovis*, or • There is a high risk that, if cattle located within the enterprise were to become infected with *M. bovis*, cattle at another location would become infected. When determining whether a farming enterprise may be classified as a High-Risk Business an Authorised Person must have regard to the mandatory matters. The Authorised Person may also have regard to any other matters they consider to be relevant. The process of identifying potential High-Risk Businesses will be conducted at regular intervals (every 6-12 months) and will be scalable to respond to *M. bovis* prevalence. The additional measures applied will also be proportional to the risk associated with the enterprise. The PICC and owner of the cattle will be notified in writing if it has been assessed as a High-Risk Business and the reasons for the Authorised Person's decision and be provided information about the additional risk management (biosecurity practises) that should be identified to minimise the risk of *M. bovis* transmission. A direction under this rule may apply to all or only specified locations at which the High-Risk Business is operating.
SPECIFICATIONS	
Mandatory matters	The Authorised Person must consider the following mandatory matters in determining whether a business is a High-Risk Business: • The number of locations from which cattle in the business are sourced and the number of those on which dairy cows are held. • The current and likely future stocking density of cattle at the location where the cattle in the business are held. • If any cattle in the business were to be infected with *M. bovis*, the number of cattle that could be put at risk of being infected with that organism, or the number of locations to which it may spread, due to: – direct cattle-to-cattle contact; or – milk-to-cattle transfer; or – indirect transmission pathways. • If any cattle in the business were to be infected with *M. bovis*, the potential risk that the prevalence of infection among cattle in the business could be sustained. • The history of the compliance or non-compliance of the PICC in the business with any of the tracing records, declaration and information requirements set out in rules 1 to 3 of the *M. bovis* NPMP (as applicable). • Any risk management practices for *M. bovis* that are being applied in the business.

Desktop Analysis	MBfree will utilise NAIT records to identify potential High-Risk Businesses - based on, but not limited to, the following metrics: • Number of unique NAIT accounts received from. • Number of unique NAIT accounts sent to. • Peak number of registered cattle. NAIT compliance data may be used to help identify potential High-Risk Businesses. This includes: • Broken chains (unrecorded movements). • Action required (unconfirmed movements.
Risk Assessment	A portion of the higher-risk NAIT accounts identified through desktop analysis will be assessed with consideration of the mandatory matters, using NAIT records and available data, such as background surveillance coverage, farm business practice and recent sampling/testing, to determine what level of additional measures may be required.
Additional Measures	Following the decision MBfree may require, by written direction, a PICC or owner of cattle related to the High-Risk Business to enable and facilitate an Authorised Person to; • Evaluate their compliance with NPMP rules. • Make an assessment of existing *M. bovis* risk management practices being applied in the business. • Audit the effectiveness of any of those risk management practices being applied. And if required to do so; • Arrange and submit cattle or risk goods for examination, inspection, sampling/ testing as directed.
Risk Management Practices	Under the High-Risk Business policy, risk management practices should be documented in a biosecurity plan and should align with industry standards for example the DairyNZ biosecurity planner template and the Beef + Lamb NZ drystock biosecurity guidelines. Support will be available to provide guidance and assistance to develop a suitable risk management / biosecurity plan if you are required to develop one.
Submission of cattle and risk goods	An Authorised Person will work with the PICC or owner of the cattle to develop a plan for any required examination, inspection or sampling. This plan will be tailored to suit the individual farm business practice and risk profile.

15. Feral cattle

Policy	Feral cattle that are associated to restricted places (s130) or controlled areas (s131) may be considered at-risk of *M. bovis* infection transmission and need to be managed accordingly. Feral cattle are cattle that are not kept under any direct human supervision or control.
Implementation Statement	Targeted sampling may be required for populations of feral cattle where there is a risk that they have been exposed to *M. bovis* through association with a restricted place or controlled area. The sampling requirement will be in accordance with protocols approved by, or under the direction of, MBfree. In line with the Sampling policy, where on-farm sampling is not practical/safe, sampling may be completed during slaughter.
SPECIFICATIONS	
Risk assessment	MBfree will make an assessment of feral cattle associated with a restricted place or controlled area to determine their risk and whether any further investigation is required. Consideration will be given to both their exposure to *M. bovis* to-date, but also the ongoing risk they pose for harbouring infection and future transmission events.
Sampling plan	MBfree will identify and engage with the occupier, owner or manager of the land on which the feral cattle are located to develop an appropriate plan for completing the required sampling. In such circumstances where MBfree and the occupier/owner/manager are unable to reach agreement on a plan for sampling, then an Authorised Person may issue legal notices directing sampling and the associated assistance to muster and present the feral cattle. If necessary, through non-compliance or if an owner/occupier/manager cannot be contacted, an Authorised Person may exercise powers of sections 109 and 114 of the Act to gain entry and do anything considered necessary to prevent the spread of *M. bovis* from or to the place, including mustering, yarding, sampling, or even removal/cull. Any exercise of powers for the purposes of sampling or removing feral cattle will require written approval of the Chief Executive of MBfree.

16. Compliance

Policy	MBfree is obliged to monitor compliance with the Act, the NPMP and the NAIT Act, and address instances of non-compliance in an appropriate manner.
Implementation Statement	MBfree will apply, with the support of MPI, the VADE (Voluntary, Assist, Direct, Enforcement) model to ensuring compliance with the NPMP. Under the VADE approach, MBfree will monitor farmers and other parties' compliance with the NPMP and engage with them to address any non-compliant behaviour/action. MBfree may transfer investigations into suspected non-compliance to MPI when such investigations require the application of MPI's specialist competencies.
SPECIFICATIONS	
Enabling compliance	The following areas of non-compliance will be considered by MBfree to constitute minor instances of non-compliance and will be subject to compliance interventions by MBfree: • Failure to comply with directions made by an Authorised Person using powers conferred under the Act for the purposes of implementing the NPMP: – Failure to present cattle for slaughter. – Failure to present cattle for examination or inspection within a specified timeframe. – Failure of PICC to enable (MBfree contractors or staff) to undertake cleaning and disinfection. • Failure to meet with obligations in the NPMP rules: – Failure to present cattle for sampling, identification or inspection where it is considered safe and reasonable to do so. – Failure to provide information. – Failure to keep suitable tracing records. When instances of minor non-compliance are identified, MBfree may utilise a series of available options. These include: • Referring the matter to industry partners for assistance. • Arranging for the person to receive assistance to aid them in becoming compliant; and • An Authorised Person issuing a time-bound direction under the Act. Continued non-compliance following assistance or time-bound directions may be referred to MPI for further investigation. The cost of additional resources to carry out enforcement of a legal direction may be recoverable from the person to whom the direction was issued as a debt. If there is any instance of non-compliance with the NPMP rules or directions under the Act, appropriate actions will be taken to minimise the risk of infection spread.
Serious non-Compliance	The following areas of non-compliance are considered to pose a significant risk to the achievement of the NPMP's objectives, and are deemed by MBfree to constitute serious non-compliance: • Movement of cattle on to or off a property that is subject to movement restrictions (under s122 or s130) where such movements are not allowed under the legal notice and permission was not granted by an Authorised Person under the Act. • Any breach of the conditions within a movement control NOD, restricted place notice and/or permit issued by an Authorised Person or Inspector. • More than one instance of minor non-compliance where a compliance intervention by MBfree has been ignored. Instances of serious non-compliance, including any documentary evidence of action previously taken by MBfree, will be referred to MPI Compliance for further investigation and action. Serious non-compliance may impact any entitlements to Compensation payable under the National Pest Management Plan for *M. bovis* or under section 162A of the Act.

NAIT or Animal Welfare Non-Compliance	If NAIT non-compliance is identified, the person will be advised to remedy. The person will also be referred to NAIT LTD for further investigation and action if deemed necessary. If non-compliance with the Animal Welfare Act 1999 is observed by any person working for MBfree, this non-compliance will be reported to the MPI Animal Welfare Team for further investigation and action.
OFFENCES	
Strict Liability Offences	Under the NPMP, failure to comply with the following Rules constitutes an offence unless an exception as set out in the relevant rule applies. • Rule 4: Transporters of raw milk for cattle feed to provide tracing information on delivery. • Rule 5: People who take delivery of raw milk for cattle feed to keep tracing information. • Rules 6-12: Sampling and testing. • Rules 13 - 15: Facilities, assistance and identifiers. • Rules 16 – 17: Isolation of cattle and risk goods. • Rule 18: Audit and surveillance testing, etc, for high-risk business. • Rules 20 – 21: Commercial slaughter businesses. • Rule 22: Approvals to vaccinate, medicate or treat cattle. • Rule 23: Provision of information to MBfree (*M. bovis* Free NZ). Under section 154N of the Act: • Failure to comply with directions issued under section 121 the Act constitutes an offence. • Interference with or movement of an article or substance brought not or left in place under s121A constitutes an offence. All strict liability offences are treated as serious non-compliance.
Other offences	Under section 154H of the Act, the Director General may apply to the High Court for an order that a person pay a penalty for failure to comply with a direction under section 122 of a declaration of restricted place notice under section 130.

17. Reimbursement of costs

17.1 Compensation

Policy

Compensation is payable to a PICC or owner of cattle business if MBfree, in using powers under the Act to implement the NPMP, causes that person to incur a loss as a result of:

- Damage to or destruction of their property, or
- restrictions on the movements or disposal of their goods.

The loss must be verifiable, and is loss that the person has been unable to mitigate by taking every step that is reasonable in the circumstances.

Compensation is not payable for:

- Loss suffered because a person's income derived from feral or wild organisms is adversely effected by the implementation of the NPMP.
- Losses suffered prior to when MBfree established the presence of *M. bovis* on the Place.
- Losses as a result of not complying with the NPMP (e.g. meeting Directions and Rules).

The amount of compensation paid must put the person to whom it is paid in no better or worse position than a person whose property or goods are not directly affected by the exercise of the powers.

A person must make a claim for compensation within 1 year after the date on which the loss suffered by the person ought reasonably to have been verifiable.

A claim for compensation received after that 1-year period may be declined on the basis that the claim is late only if the claim's lateness prejudices the decision maker in their ability to assess the claim.

However, compensation is not payable for a claim for compensation received later than 3 years after the date on which the loss suffered by the person ought reasonably to have been verifiable.

If there is a dispute about eligibility for, or the amount of compensation:

- The dispute must be submitted to arbitration within 3 months of assessment of the claim; and
- the arbitration must be conducted under the Arbitration Act 1996.

Implementation statement

The PICC or owner of cattle business must provide, in the published format, verifiable evidence of the loss, and demonstrate they have taken every reasonable step to mitigate the loss.

Compensation applications will be assessed by MPI's Compensation Team and prepare a memorandum outlining its recommendations to MBfree including a draft decision letter for MBfree review and approval.

Once approved by the delegated decision maker within MBfree, the decision letter will be sent by MBfree to the claimant.

SPECIFICATIONS

Types of losses that might be compensable include:

- stock destroyed,
- income losses arising from restrictions on the movement or disposal of a person's goods,
- repopulation costs,
- beef and/or milk production losses, and
- contractual income losses.

Verification of losses might include:

- the exercise of power that caused the loss,
- loadout records of animals removed from the farm,
- killsheets of the cattle culled,
- historical killsheets or invoices confirming values and weights previously achieved,
- confirmation of expected schedule prices or sales prices,
- confirmation of avoided stock maintenance costs (feed, animal health etc.),
- confirmation of any other avoided costs (transport etc.),
- confirmation of any mitigation income achieved,
- milk statements, and
- fertiliser statements etc.

REGULATORY FRAMEWORK

Schedule 1, clause 19 of NPMP

17.2 Operational and mustering costs associated with complying with directions

Policy	Operational costs associated with complying with directions may be reimbursed on a discretionary basis
Implementation statement	MBfree may reimburse the PICC or owner of cattle business and other related parties additional costs incurred in meeting requirements of the NPMP (ie. supplementary feed for overstaying cattle, truck washing, etc.) up to a cap of $50,000. These costs are only payable for additional costs over and above day to day costs of undertaking their business, that have resulted from the powers exercised by MBfree. The PICC or owner of cattle business must provide, in the published format, verifiable evidence of the cost incurred, or the cost it needs to incur, and demonstrate they have taken every reasonable step to minimise the cost. A record of such costs should be maintained so that they can be accurately reconciled against any subsequent compensation claims assessed by MPI's Compensation Team. Any reimbursement of costs will be taken into account when assessing subsequent compensation claims to ensure the person is put in no better or worse position than it otherwise would have been, had powers not been exercised.
Mustering payment	The PICC or owner of cattle business may claim a one-off payment up to the total value of $500.00 excl GST per round of sampling towards any on farm mustering expenses if the property in question meets the following criteria: • Mustering was undertaken primarily to collect samples for *M. bovis*, and was not part of a planned farm activity or combined with another activity (e.g. milking, drenching). • The muster delayed or disrupted usual on-farm activity. • Each round of mustering took four or more hours to complete. • Cattle were presented for sample collection (rather than samplers going to the animals). Additional evidence may be requested by MBfree should the claim not meet the above criteria.
Additional Resources	More information on compensation for *M. bovis* can be found on the OSPRI website.

18. Farmer wellbeing and engagement

Policy	MBfree will provide support to people affected by measures to eradicate *M. bovis*, with the aim of improving personal and therefore community resilience. All affected people will be treated fairly, with respect, and with recognition of stress that may be suffered.
Implementation statement	Best practices will be followed to minimise the physical, psychosocial and social consequences of *M. bovis* eradication for those who are affected by the activities of MBfree. Best practices will draw from evidence-based international guidelines and principles in line with the National Health Emergency Plan (Ministry of Health, 2015) and Framework for Psychosocial Support in Emergencies (Ministry of Health, 2016). MBfree will work in partnership with other agencies, where appropriate, to deliver support to affected people and communities.
SPECIFICATIONS	
Human Wellbeing	People affected by MBfree's activities will be offered support. Support will be tailored to the individual's needs as much as practicable. All MBfree staff and service providers are responsible for escalating any concerns about perceived risks to human wellbeing as appropriate and as prescribed by protocols. MBfree will establish, maintain and develop support interventions that are intended to meet the needs of affected people and communities.
Financial Assistance	Financial assistance may be provided in circumstances where MBfree 's activities have impacted a person, or their business, as set out in the Reimbursement of costs policy.
Referral to External Services	Affected persons may be offered referral to external support services. Any referral to external support will require the permission of the affected person for any personal information to be provided to external support providers unless there is an immediate risk of harm.
Management of Places subject to a Notice under the Act	All persons who are responsible for a property subject to a Notice under the Act will be assigned an MBfree point of contact while the property they are responsible for is under said notice. This point of contact will continue to provide support and information following revocation of notices as necessary. All interactions and communications between those responsible for a property subject to a Notice under the Act and those working for MBfree will be documented and saved for future reference.
Personal Information	Any personal information collected will be kept confidential and used only for the purpose of delivering the *M. bovis* National Operational Plan.
Additional Resources	More information on support for farmers can be found on the OSPRI website.

APPENDIX 1 – GLOSSARY OF TERMS

TERM	DEFINITION
Active Confirmed Property	A property that has met the case definition for *M. bovis* (i.e., infection with *M. bovis* has been confirmed on the property), a Restricted Place Notice is served, and infected cattle and in-contacts require depopulation.
Active Surveillance (AS) property	Properties with a low risk of exposure to *M. bovis* undergo precautionary testing to ensure that there is no infection in their cattle.
Animal	has the same meaning as 'cattle'.
Animal Health Laboratory (AHL)	The MPI Animal Health Laboratory at Wallaceville, Upper Hutt.
Animal identifier	means as defined under the National Animal Identification and Tracing Act 2012 (The unique identifier that applies to an individual NAIT animal).
Animal movement	means the relocation of an animal that: • Begins when the animal is removed from its herd of origin, or another place at which it is being kept or held; and • ends when the animal is delivered to its final destination. A movement does not include any relocation made for the purpose of relocating a cattle beast from one part of a property to another part of the same property where that relocation does not result in a change in the herd of origin in respect of that cattle beast.
Animal products and by-products	Any material derived from any animal of the family Bovidae, subfamily Bovinae, including milk and germplasm.
Approved	means: • In relation to a test for *M. bovis*, means approved by a chief technical officer; and • in relation to a diagnostic laboratory, means approved by a chief technical officer.
Authorised Person	A person appointed under section 103 of the Biosecurity Act 1993. Authorised Persons have certain powers under the Act and are responsible for administering and enforcing all or any of the provisions of this Act (also see Inspector).
Background surveillance	Surveillance that screens for infection in cattle across New Zealand. Designed to gather confidence of absence but can also be a useful case finding tool.
Backward trace	A movement of cattle or risk goods (such as milk) onto a property that could have caused infection with *M. bovis*.
Biosecurity Act 1993 (the Act)	The Act is the legislation that governs and enables activities under a National Operational Plan to be legally carried out, and which provides for these activities to be carried out under a regulated National Pest Management Plan.
Business as Usual (BAU)	The normal/usual operations of a farming enterprise.
Case Definition	A Management Group from which samples collected on-farm have produced two rounds of positive herd-level serology or a sample collected from cattle has tested positive on PCR.

Case Manager	Programme staff who work with properties to oversee *M. bovis* related activities.
Case review	An examination of all Confirmed Properties and how they fit in the network of Confirmed Properties.
Cattle (or cattle beast)	means any animal of the family Bovidae, subfamily Bovinae.
Cattle of interest	means cattle that are associated with a risk event and require sampling without movement restrictions to determine infection status.
Census	In relation to cattle mustered and presented at a place, means the identification and head count of all cattle beasts at the place.
Cleaning and Disinfection	The process of removing contamination and reducing the number of organisms in an environment to reduce the likelihood of infection in animals that may enter that environment following Cleaning and Disinfection.
Cleared Confirmed Property	A Confirmed Property that has undergone depopulation, Cleaning and Disinfection and/or stand-down, and legal instruments revoked.
Close Contact	Sharing the same grazing paddock or pen, milking shed, or rearing in the same facility, such as calves in a calf-rearing shed.
Commercial slaughter premises	means the premises of an animal product business within the meaning of the Animal Products Act 1999 in which livestock are slaughtered under a risk management programme registered under Part 2 of that Act or a regulated control scheme made under Part 3 of that Act.
Commercial testing	The application of diagnostic tests for *M. bovis* for any purpose outside the programme.
Compensation Costs	Financial compensation for losses claimed by a person affected by *M. bovis* eradication activities that is payable under section 162A of the Act or as provided for under a National Pest Management Plan.
Confirmed Property	A property where *M. bovis* infection in cattle has been confirmed as case definition has been met (see case definition).
Critical date	The date from which surveillance data contributes to confidence of absence. It is the last time that active circulation of *M. bovis* was thought to occur (i.e. the last known farm to farm transmission event). In our database this will be the most recent infection date for a confirmed infected property.
Dairy collection agent	Means: • a dairy processor whose business includes buying milk solids from a dairy farmer; and • a person whose business includes buying milk solids from a dairy farmer for supply directly or indirectly to a dairy processor
Dairy farmer	Means a person whose business includes producing milk solids for supply to a dairy processor, including a dairy farm owner, a dairy farm leaseholder, and a sharemilker.
Dairy supply number	An identifier assigned to farm dairy by a raw milk collection agent for the purpose of buying milk solids from a farm dairy
Detect	A sample from background surveillance that has returned a result above the threshold for the test.

Enzyme-Linked Immunosorbent Assay (ELISA)	A diagnostic test that detects the presence and concentration of antibodies to a specific organism.
Exotic Disease Investigation Report (EDIR)	An on-farm/site investigation completed by a veterinarian when a property is likely to become, or becomes, a Confirmed Property. Information is gathered about farm management practices and movements of cattle and risk goods are assessed to determine the risk of infection spread across the property or multiple properties.
Farm dairy	A place where milking animals are milked on a permanent or temporary basis, and • includes: – Any stockyard, milking yard, feedyard, silo pad, or other construction associated with or involved in the activity of extracting milk from milking animals; and – any place where milk from the milking animals is first collected, filtered, deposited, cooled, stored, or treated for transport or for further processing; but • does not include any place where any further processing takes place, or transport to that place.
Farm dairy operator	Has the meaning given in section 4(1) of the Animal Products Act 1999.
Feral Cattle	Cattle that are not kept under any direct human supervision or control.
Forward trace	A movement of cattle and risk goods (such as milk and colostrum) from a Confirmed Property during the infection risk period. The cattle or goods are determined to be either low risk or high risk.
High-Risk Business (HRB)	A cattle farming enterprise that has been identified as high-risk (under rule 19 of the NPMP) that may be required (under rule 18) to enable the assessment and audit of risk management practices and compliance with the NPMP, and facilitate sampling if necessary.
In-contact cattle	Cattle that have had close contact with cattle of interest or trace-forward cattle or have ingested milk from a Confirmed Property during its infection risk period.
Infection Risk Period	The period of time a Confirmed Property/NLP is considered to have been infected.
Inspector	A person appointed to carry out certain duties under section 103 of the Act. Inspectors, together with Authorised Persons, have certain powers under the Act.
Management Group	A group of cattle that presently share the same grazing paddock or pen or are being reared in the same facility. They share the same likelihood of *M. bovis* infection.
Management Group of Interest	A management group of cattle that is associated with a risk event and requires sampling to determine its infection status.
National Animal Identification and Tracing (NAIT)	New Zealand's official and legislated system of cattle and deer identification and individual electronic animal movement recording as required under the National Animal Identification and Tracing Act 2012.
Network Linked Property (NLP)	A property for which there is significant evidence to suggest that it contained infected cattle for a period but was not confirmed to be infected.
Network surveillance	Sampling of cattle on properties connected to Confirmed Properties/NLPs via movements of cattle and/or risk goods.
Notice of Direction (NOD)	A legal notice issued under section 122 of the Biosecurity Act 1993.

Operational Cost	Discretionary reimbursement of costs incurred through complying with NPMP requirements.
Owner-Other Property	A property or enterprise operated or owned by the same owner or person in charge of cattle (PICC) of a Confirmed Property (can be defined as High-Risk Owner-Other Property or Low Risk Owner-Other Property).
Person in charge of cattle (PICC)	An individual or body corporate who or that is in day-to-day charge of cattle.
Place	Includes any building, conveyance, craft, land, or structure, and the bed and waters of the sea and any canal, lake, pond, river, or stream.
Polymerase Chain Reaction (PCR)	A diagnostic test that detects DNA from a specific organism.
Programme	A reference to the *Mycoplasma bovis* Eradication Programme.
Property of Interest	A property with that requires investigation to determine its *M. bovis* infection status.
Proximity property	A property that neighbours, or is in proximity to, a Confirmed Property or NLP and is determined to be at risk.
Proximity sampling	Sampling of cattle on proximity properties.
Raw milk	Dairy cows' milk that is intended for human consumption, or consumption by cattle, in its raw state.
Raw milk supplier	A farm dairy operator who produces and processes RCS raw milk.
Reactor	Cattle that have reacted on an ELISA test above the threshold of the test.
Regulated Control Scheme (RCS) raw milk	has the meaning given in regulation 4 of the Raw Milk for Sale to Consumers Regulations 2015. RCS is legislation for selling untreated raw milk. An RCS is imposed by the government to manage food related risks.
Restricted Place (RP) Notice	A legal notice declaring a Place as restricted under section 130 of the Act that restricts movement of cattle and Risk Goods on to and off a property.
Radio Frequency Identification Device (RFID)	A technology in the form of an ear tag applied to cattle. The device carries a unique identifier which is linked to a Person in Charge of Animals (PICA) and a place in the OSPRI NAIT system. Subject to accurate recording it allows the animal's movement to be tracked.
Risk Event	A record of a disease transmission risk. A risk event is created against a property when it is determined via network or background surveillance that there is an increased risk of *M. bovis* infection on that property. Risk events require further investigation.
Risk Goods	Any organism, organic material, or other thing, or substance, that (by reason of its nature, origin, or other relevant factors) it is reasonable to suspect constitutes, harbours, or contains *M. bovis*.
Samples	A representative part or a single item from a larger whole or group collected for testing for the presence or absence of *M. bovis*, including tissue specimens, blood samples, milk samples or environmental samples.

Sampling Protocol	Procedures required to be followed to collect representative samples for the purposes of determining infection status and how results should be interpreted.
Slaughter collection agent	A person operating commercial slaughter premises.
Step-Through	A property that previously contained high-risk trace-forward cattle.
Stock Classes of Interest (SCoI)	Stock classes present on a property that are not associated with a risk event but that require testing under Programme specifications. These can include dairy replacement cattle and beef breeding cattle.
Test	A procedure to establish the presence or absence of *M. bovis* that is applied to— • A live or dead animal; or • any sample of material— – taken or derived from a live or dead animal (for example, blood, serum, tissue, semen, germplasm, or milk); or – taken or derived from a live or dead embryo of an animal; or – taken from the environment of a live or dead animal.
Trace-forward cattle (high-risk)	Cattle that moved off a Confirmed Property or NLP during the infection risk period.
Trace-Forward Milk movement	Raw Milk that has moved from a Confirmed Property or NLP during the Infection Risk Period.
Transitional Notice of Direction (TNOD)	A legal notice issued under section 122 of the Act that prevents unauthorised movements of cattle or risk goods on or off the property. A TNOD provides the opportunity to complete further investigation that informs the placement of the RP notice.
Unique identifier	In relation to a milk supplier, the farm dairy name and address OR the dairy supply number and dairy processing company code of the farm dairy OR the NAIT number of the farm dairy. In relation to a transporter, the unique driver identifier allocated by a dairy processor and the name of the dairy processor OR the name of the driver and the dairy processor or the relevant business name of the entity for which the work is carried out, AND the run number allocated for the transportation and delivery (if applicable) OR identifying particulars of the vehicle (e.g. licence plate).
Veterinarian	A person registered and holding a current practising certificate as a veterinarian or a specialist under the Veterinarians Act 2005.