



In-Confidence

Aide-Memoire: Lincoln University *Mycoplasma bovis* update

To:	Hon Chris Hipkins, Minister of Education
From:	Gillian Dudgeon, Deputy Chief Executive – Delivery, Tertiary Education Commission
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Purpose

1. This aide-memoire provides you with information on *Mycoplasma bovis* (*M. bovis*) being found at Lincoln University's (Lincoln's) Ashley Dene Research and Development Station (Ashley Dene) and the impact on Lincoln's operations.
2. The Ministry for Primary Industries (MPI) is leading the response and provided an update to the Minister for Biosecurity on 12 November 2020 (AM20-0707 refers). It was recommended that this briefing was forwarded to you as Minister of Education.
3. We recommend that this aide-memoire is proactively released with redactions made as required to protect the commercial position of Lincoln.

Background on *Mycoplasma bovis*

4. *M. bovis* is a bacterium that can cause a range of serious conditions in cattle including mastitis that does not respond to treatment, pneumonia, arthritis and late-term abortions. The disease may be dormant in an animal – causing no symptoms at all for some time. However, in times of stress (e.g. calving, drying-off, transporting or being exposed to extreme weather) the animal may shed bacteria in milk and nasal secretions. As a result, other animals may be infected and become ill or carriers themselves.
5. In July 2017, MPI announced the first case of *M. bovis* in New Zealand. This was the first time it has been found in New Zealand. The bacteria is an Unwanted Organism under the Biosecurity Act 1993. *M. bovis* is not listed with the OIE (the World Organisation for Animal Health) and does not present a trade risk for New Zealand animal products.
6. *M. bovis* is managed under the Biosecurity Act 1993, and Notices of Direction and Restricted Place Notices are issued under sections 122 and 130 respectively.
7. On farm, *M. bovis* is spread from animal to animal through close contact and bodily fluids, for example, mucus and milking equipment. Calves can be infected through drinking milk from infected cows. Off farm, the disease is mostly spread through movement of cattle from farm to farm. Movement restrictions preventing the spread of stock off infected properties are the most appropriate measures to contain *M. bovis*. Farm equipment may play a role in the spread of the disease, especially equipment that comes into direct contact with infected

animals (such as artificial insemination instruments). Vehicles and people movements pose very little biosecurity risk.

8. *M. bovis* is not a food safety risk. It is a disease that affects animal welfare and production. It affects only cattle, including dairy cows and beef cattle. It is common in many food-producing nations where infected animals that are not showing symptoms are processed for human consumption.
9. The Government and farming sector bodies announced on 28 May 2018 that an attempt will be made to eradicate *M. bovis* from New Zealand. As of 19 November 2020, *M. bovis* has been confirmed on 257 properties in New Zealand, with 124 in Canterbury. There are currently 7 confirmed active properties, all in Canterbury, with the other 250 cases cleared.

Background on Ashley Dene Farm

10. Established in 2016, Ashley Dene is a world-leading farm systems research facility situated on 190 hectares, with a milking platform effective area of 180 hectares. It is located at Burnham, about 30 kilometres south of Christchurch and 15 kilometres from Lincoln's campus. Ashley Dene is one of three dairy farms Lincoln owns and operates for research, teaching and commercial purposes.
11. The vision for Ashley Dene is to develop, quantify and demonstrate the effect of new dairy and livestock farming systems on profitability, environmental and welfare performance. It has a split calving herd structure, with 450 cows calved down in the spring and 75 to 80 cows calved down in the autumn.
12. Ashley Dene has a current annual research portfolio of [REDACTED] projects across postgraduate studies, internal programmes and externally funded programmes (totalling [REDACTED] contracts). The 2020 revenue from externally funded programmes totals approximately [REDACTED] s9(2)(b)(ii) for projects that have some part of research to be carried out at Ashley Dene.

The identification of *M. bovis* at Ashley Dene

Ashley Dene was first identified as potentially having *M. bovis* in September 2020...

13. On 25 September 2020, Ashley Dene was placed under Notice of Direction (NoD) by MPI due to a risk that the cattle on the farm might be infected with *M. bovis*. The NoD followed a positive test in bulk milk tank samples (from milk vat) collected as part of a national programme of *M. bovis* testing for all New Zealand dairy farms. The NoD restricted the movement of cattle and high-risk goods off the farm until further notice.
14. Being issued a NoD does not necessarily mean the cattle on the farm are infected. As per *M. bovis* protocols, further blood testing is then required. However, at this time Lincoln made the decision to voluntarily lock down all three farms within the enterprise until the disease status was confirmed. This included cancelling planned events and demonstration days.

...with *M. bovis* confirmed at Ashley Dene in early November 2020...

15. Following two positive blood tests of cattle on Ashley Dene, the farm was confirmed infected on 6 November 2020 and Ashley Dene was placed under a Restricted Place Notice (RPN). As a consequence of the RPN, all cattle will be culled, including mature cows and replacement stock. The farm will also be cleaned and disinfected by a contractor at Government and industry expense, and then would need to be kept free of cattle for 60 days after which the farm can be restocked. The timing of any cull is established by MPI and Lincoln to minimise the impacts on production and, in this case, the impact on research trials in operation.

...and further testing is being undertaken at Lincoln's two other dairy farms...

16. When Ashley Dene was put under a RPN, Lincoln's other two dairy farms were put under NoD as a precaution until further testing could be undertaken. As noted in MPI's briefing, these two dairy farms have had a first round of testing. Results from round one are negative and the disease status of Lincoln's other farms will not be known until the second round of testing.
17. However, there are trace animals on both farms that will need testing at slaughter. In the meantime, the trace animals are being identified and will be culled, as is standard practice. Ashley Dene animals have mixed with both of Lincoln's other dairy farms, and winter grazed with one of them. It is likely the Ashley Dene animals were infected at this time, so there is a risk there will be large numbers of trace animals from this event. At this stage, the number and location of any trace animals is still being confirmed. If the number is large, it may take some time to remove and cull the trace animals which means there may be a delay until the infection status of these farms is confirmed
18. All trace animals are tested at slaughter and if a positive test is received before round two testing takes place, the farm will be confirmed infected at that point and round two testing will not be required.

...as MPI investigate the source of the infection

19. MPI's briefing outlined that the source of infection at Ashley Dene has not been identified and its *M. bovis* Programme's disease control team is looking at possible sources. An exotic disease investigation report (EDIR) was completed for Ashley Dene when it first went under NoD, and this provided evidence that the infected farm has mixed with a number of different animals across Lincoln's enterprise. This is why all farms within the enterprise are now under NoD.
20. An enterprise-wide EDIR was recently completed and all of Lincoln's farm managers have been interviewed. MPI is now reviewing this information alongside Lincoln, with all risk events (potential infection spread) being followed up, and potential infection sources investigated. MPI noted that Lincoln's farms have good records demonstrating movements in and out of its enterprise.

Impact on Lincoln University

21. Lincoln formed a critical incident management team on 29 September 2020 in response to the potential *M. bovis* infection. This team will be responsible for managing research and education, the recovery plan, and communications. MPI noted it is working well with Lincoln on this matter and it is very much a partnership approach with two MPI staff members embedded in the incident management team. MPI also noted that it is working with Lincoln to allow them to operate as normal as possible within the movement restrictions under the Biosecurity Act.
22. We have engaged with Lincoln on the impact that the *M. bovis* infection will have on its operations. While the situation is still developing, the various impacts are summarised below.

Lincoln expect limited financial impact...

23. Lincoln is able to claim compensation through MPI due to the *M. bovis* infection. Compensation claims are made through MPI under categories of stock destruction, repopulation, and loss of milk claim.
24. Currently Ashley Dene produces 200,000 kilograms of milk solids per year with revenue for 2020 approximately s9(2)(b)(ii). s9(2)(b)(ii)
Lincoln expect to be compensated fully for the lost production for the 2020/21

milking seasons and the s9(2)(b)(ii) maintained pending final milk price. Other costs incurred under notice (e.g. feed costs for holding cattle) are to be claimed separately.

25. s9(2)(b)(ii)

. While the animals on Ashley Dene have been valued at market rates, there is also ongoing discussion between Lincoln and MPI given the stock also has research value over and above the market value.

26. Given the compensation, the *M. bovis* infection is expected to have little impact on Lincoln's overall financial position.

...and the impacts on research are being closely managed...

27. Overall, there has been limited impact on Lincoln's research programme because of the *M. bovis* infection. There have been some minor delays, and the need to re-prioritise and pivot some research projects, but nothing that has resulted in any significant impacts. There are a number of ongoing research projects at Ashley Dene that Lincoln would like to complete before depopulating. As such, it is likely that culling will occur in early 2021, although no date has been confirmed. Lincoln is working closely with MPI on the timing.

28. Lincoln has put in place protocols for access to Ashley Dene for research purposes under the RPN, including acquisition of required permits. These were communicated to all Lincoln staff, research students and external parties on 14 October 2020. Lincoln is using key learnings from processes involved in the discontinuation of research in response to COVID-19 lockdown level 4 to inform how to respond to *M. bovis*. This includes open communication to staff and students, identification of critical researchers, protocols for access, and key principles around re-prioritisation and pivoting research wherever possible.

29. With the right protocols in place there is no reason that animal, plant and soil research cannot be continued until depopulation occurs in early 2021. Following depopulation, and decontamination, Ashley Dene will be able to be repopulated for June 2021. This should allow the continuation of planned research programmes starting September 2021.

30. Lincoln consider that a culling programme with sufficient downtime for resetting pastures and crops, provides an opportunity to consider how to s9(2)(b)(ii)

...while a communications plan has been put in place...

31. At the time the first NoD was served, key stakeholders and staff were informed of this development and the impacts on the farm. Once the farm was confirmed infected and the RPN served, all contiguous farms were advised of the infection status and what it meant for them.

32. In-person meetings were held with each contiguous neighbour requiring on-farm testing due to the risk profile. These meetings were held with Lincoln staff and MPI staff, providing a unified front and an opportunity for the neighbours to ask any questions. These visits were followed up by letters from MPI.

33. Farmers that needed to be notified of the infection status of the farm but required no on-farm testing were sent letters from MPI advising Ashley Dene has been confirmed infected with *M. bovis* and there is no risk to their property.

34. Lincoln has developed a detailed communications strategy in response to the infection and are working closely with MPI on the communications response. This includes ensuring any

messaging is aligned and keeping each other informed of any media interest. To date, MPI have noted there has been no interest from the wider public or media. No planned proactive statements are planned at this stage.

- 35. There is some reputational risk to Lincoln if the infection is picked up in media and becomes more widely known. s9(2)(b)(ii)

...and Lincoln is closely supporting staff

- 36. A critical concern for Lincoln at this point is staff wellbeing and the significant strain this is placing on farm and research staff. There is significant uncertainty at this point and Lincoln have informed us that staff members are being placed under significant stress in relation of farm operations, animal welfare and the upcoming culling. All staff have been offered support and Lincoln will also be engaging the Rural Support Trust to provide additional farm-specific support to farm staff. Additional administrative support will also be put in place to support the farm managers with collation of data for MPI.

Next steps

- 37. While MPI is leading the response, we have asked that both Lincoln and MPI keep us to date with any major developments as they occur, especially from a communications perspective.
- 38. We will update you with any key developments as they occur.



Gillian Dudgeon

Deputy Chief Executive – Delivery
Tertiary Education Commission

26 November 2020



Hon Chris Hipkins

Minister of Education

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