



Lord Howe
ISLAND BOARD

BIOSECURITY STRATEGY

2022 - 2024

Version	Date	Author	Revision reason
1.	August 2022	Chris Birmingham	Final version
2.	June 2023		Date for next review

1. Introduction

Effective biosecurity is essential to ensure no further pest species become established or re-established on Lord Howe Island. It is fundamental for protecting the Island's World Heritage values, improvements to agriculture and horticulture, community health, and recovery of native species and indigenous ecosystems following targeted pest species removal programs.

The proposed biosecurity strategy (2022-2024) aims to reduce the likelihood of invasive species introduction from 'almost certain' to between 'likely' and 'possible'.

A rodent eradication project (REP) was conducted on Lord Howe in 2019 in order to remove the last mammalian pest animals on the island, namely black rats (*Rattus rattus*) and mice (*Mus musculus*). Pigs, goats and cats have been removed in previous eradication operations. There are also currently in place eradication projects for the Masked Owl (*Tyto novaehollandiae*), African Big-headed Ant (*Pheidole megacephala*) and Myrtle Rust (*Puccinia psidii*). Additionally, a pest plant eradication program to remove invasive plants from LHI has been running since 2004.

2. Principles

- There is a presumption that all non-native species are potentially damaging to Lord Howe Island unless demonstrated otherwise
- Biosecurity measures should apply to all island users and be targeted based on the risk to public health, biodiversity and the community, economic and island values
- Primary responsibility is placed on importers to take measures to prevent introductions
- Measures (both preventative and reactive) taken to prevent new introductions are proportionate to the risk, and efforts are made to minimise disruption to island operations
- Education and awareness raising are the preferred methods to ensure compliance and proportionate enforcement action will only be taken when this approach has been exhausted
- Eradication is the goal for all established non-native species, but in the many cases where this is not feasible, management will be targeted to reduce damaging impacts in the most efficient way

3. Strategy Objectives

- Reduced risk of non-native species being introduced to Lord Howe Island
- Early detection of any new introductions that do occur
- Reduced impact of established non-native species on biodiversity, community, economic and island values
- Increased level of knowledge about the risks posed by non-native species and understanding of measures required to minimise these risks amongst the LHI community, visitors and other stakeholders.

4. Existing Biosecurity provisions

The current LHIB biosecurity program has been operating on grant funds received in response to the presence of black rats in April 2021:

- This response ended in December 2021 with the last confirmed rodent seen alive on July 28th 2021.
- Significant additional biosecurity resources (contractors) were implemented at the main points of departure on the mainland for freight and supplies by way of increased checking of freight, goods and people destined for LHI (Birdon Shipping and Eastern Air Services).
- Improvements have been made to facilities and processes on the mainland to reduce the likelihood of pest incursion, however these existing facilities are not suited to the requirements of the level of biosecurity required to protect LHI.
- Additional staff resourcing was secured on island to facilitate an enhanced on-island surveillance plan as per the review carried out by Michael Bode and Kaitlyn Brown of the Queensland University of Technology in 2021/22.
- This review concluded that following the LHIB Surveillance plan guidelines (ED21/6847) will have a 95% probability of detecting a rodent within 12 weeks.
- Post the 2021 response a larger surveillance network of detection devices was installed on the island to increase detection probability of remaining or invading rodents, including 170 trail cameras, and other static detection devices. These are checked on a weekly and monthly schedule, as detailed in the surveillance plan.
- Rodent detection dogs conduct a complete search the settlement area on a 6 weekly rotation as per the review findings.
- Current and proposed island-based emergency biosecurity measures, principally improved surveillance, do not decrease the risk of pest species introduction, but make rapid detection more likely. These measures should decrease the duration and cost of any response and make response success more likely.

5. Assessment of introduction risk

In 2021, the risk of an incursion event at the island within the next 12 months was appraised to be “almost certain”. When discussing likelihood of entry, establishment and spread of a pest species, the risk assessment considers incursion events that have a significant ecological and or economic impact on the island. This would include, but not be limited to, rodent, reptile, amphibian and termite incursions.

Likelihood of entry, establishment, and spread	
Rating	Description
Almost Certain	Very high probability of occurring within the budgeted period.
	Has happened several times in the past year and in at least 4 of the previous 5 years, OR, has a >90% chance of occurring in the budgeted period if the risk is not mitigated.
Likely	High probability of occurring within the budgeted period.
	Has happened at least once in the past year and in 3 of the previous 5 years, OR, has a 60-90% chance of occurring in the budgeted period if the risk is not mitigated.
Possible	Even probability of occurring during the budgeted period.
	Has happened at least once during the past 5 years but not in every year, OR, has a 40 - 60% chance of occurring in the budgeted period if the risk is not mitigated.
Unlikely	Low but not negligible probability of occurring during the budgeted period.
	May have occurred once in the last 5 years, OR, has a 10 - 30% chance of occurring in the future if the risk is not mitigated.
Rare	Very low probability of occurring during the budgeted period.
	Has not occurred in the past 5 years, OR, may occur in exceptional circumstances.

Whilst improvements from 2019-2022 have been significant, there still remains a high level of risk from pest species bypassing current quarantine facilities and activities due to the nature of further improvements required that will be provided by this funding.

To date the focus has been primarily on rodents, however, the biosecurity measures implemented for rodent exclusion will provide a high level of biosecurity risk mitigation for the majority of other non-rodent biosecurity risks including reptiles, amphibians and insects.

Significant work has been done on-island and at the mainland ports of departure to reduce that likelihood in the ensuing period. However, while mainland quarantine and shipping facilities remain as they are, the risk levels remains at “almost certain”. The proposed biosecurity strategy aims to further reduce the likelihood of invasive species introduction.

6. Staff and other people resources

The Biosecurity Strategy has been developed primarily by the LHIB and will be implemented by Board staff, independent contractors and consultants as required. All members of the Biosecurity Team will receive dedicated training in their new duties and be warranted as Authorised Biosecurity Officers under the NSW Biosecurity Act. The draft structure below provides a breakdown of the proposed biosecurity team.

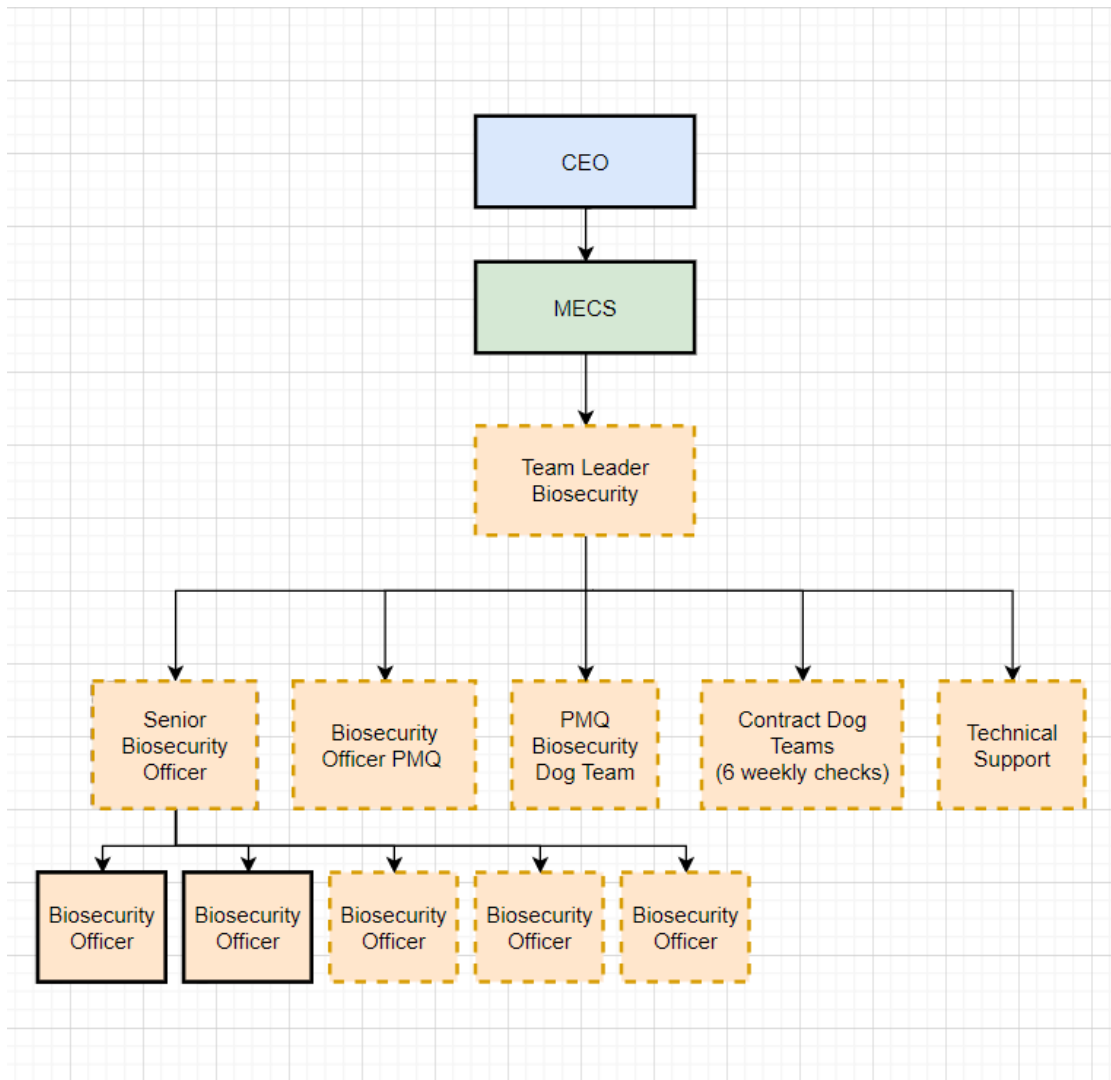


Figure 1. LHI Biosecurity Team structure

7. Implementation Activities

In 2022, a significant funding commitment was made by the state government of \$32.9 million over the next 4 years. This will enable LHI to substantially enhance and maintain existing biosecurity operations and processes, whilst progressing world class biosecurity infrastructure and systems for Lord Howe Island and its visitor and supply pathways.

In summary, activities to be undertaken against the biosecurity objectives include:

- *Minimise the risk of non-native species being introduced to LHI* - Preventing new non-native species from arriving on Lord Howe Island is the most important element of this strategy as it represents the best opportunity to control biosecurity risks in an effective and cost-efficient manner. Upgrades to infrastructure and processes at point of departure will be undertaken.
- *Early detection and of any new introductions that do occur* - Eradication of non-native species is most easily and cheaply achieved soon after introduction. Concerted and targeted efforts to detect new introductions capitalise on this opportunity to act swiftly and

effectively before species become established. This will be achieved through a combination of inspections, education, and on-island monitoring.

- *Specific surveillance monitoring for high risk groups of non-native species* - Surveillance will be conducted by the LHIB Environment team. This will focus on entry points and unloading sites and the areas immediately surrounding them. Monitoring methods are designed to give the greatest chance of intercepting the high-risk groups identified.
- *Effective response to new introductions when detected* - The detection of new introductions should trigger a rapid and effective response. This requires trained staff, clear response protocols and the availability of equipment as well as response scenario training. Contingency funding has been set aside to facilitate rapid response.

Key biosecurity actions 2022-2024

The following list of actions are scheduled to be addressed with the recent funding:

Milestone	Activity	Planned Completion Date
Biosecurity plans finalised	Biosecurity strategy, surveillance plan, response plan and compliance reporting in place	31/08/22
Community Engagement	Develop and implement a community engagement strategy	31/10/22 - ongoing
Surveillance and monitoring schedule met daily, monthly, and 6 weekly as per plan	LHI monitoring / dog searches undertaken in accordance with surveillance plan	Ongoing
	Ecological Impacts monitoring and response plan completed and implemented	30/09/22 - ongoing
	Point of Departure (POD) monitoring / dog searches undertaken	ongoing
	Temporary receiving centre/s and quarantine upgrade POD	30/12/22
Maritime Strategy developed and secured	Market sounding, tender, business case and negotiation with shipping provider for service beyond 2024 (10-15 years)	30/10/23
Major upgrade	Design and scope LHI and POD facilities	01/01/24
	Approvals and construction	30/06/26

Table 1. Biosecurity Project activities 2022 - 2026

Establishing effective biosecurity systems and infrastructure will take time. It includes several complimentary and simultaneous actions, such as community outreach and education, employing and training biosecurity staff, dialogue with and assistance for suppliers and transport operators, construction of quarantine buildings, facilities and systems, and ongoing high levels of surveillance for pest species.

Lord Howe Island's permanent population means biosecurity processes will require a significant focus on supply and visitor pathways which are often not required at the same level for unpopulated islands.

Biosecurity will be required in perpetuity to protect the LHI community, community and its unique ecological values. This strategy will focus on the establishment of the biosecurity infrastructure and processes which will need to be in place in order to ensure the protection well into the future.

8. Stakeholder and community engagement

Key stakeholders have begun to implement improvements to pre-departure biosecurity processes, however there remain significant vulnerabilities that have not been addressed.

The approved biosecurity funding 2022 will continue to overcome limitations to post rodent eradication biosecurity on Lord Howe Island and should be enacted to achieve critical biosecurity outcomes.

Community engagement and education will be an essential part of this strategy and are crucial to preventing the introduction of new species and their establishment on the island.

A community engagement strategy will be implemented to inform and guide our biosecurity improvement work. Key messages to be included are:

- Important improvements to Lord Howe Island biosecurity have been made over the past 12 months, reducing the overall frequency of pest detections at LHI.
- At the mainland facility the risk is still extremely high and invasive pests are intercepted during every loading period.
- While it is recognised that our key stakeholders (Birdon and Eastern Air) have improved pre-border biosecurity processes, there is still some urgency in addressing the remaining critical vulnerabilities.
- Interim biosecurity measures such as increased frequency of dog inspections will need to remain in place until effective long-term biosecurity infrastructure and processes are established. This is linked to the current renegotiation of the shipping contract.
- Current and proposed island-based emergency biosecurity measures, principally improved surveillance, do not decrease the risk of pest species introduction, but make rapid detection more likely. These measures should decrease the duration and cost of any response whilst making response success more likely.

In 2021, the risk of an incursion event at the island within the next 12 months was appraised to be “almost certain”.

The proposed biosecurity strategy aims to reduce the likelihood of invasive species introduction from ‘almost certain’ to between ‘likely’ and ‘possible’ depending on stakeholder compliance and implementation of the above actions.

Ultimately, the intention is to have reduced this likelihood to “rare” or “unlikely”. The implementation of a new facility and processes on the mainland at points of departure will have the most significant impact on this coupled with a strong community and stakeholder engagement process.

9. Meeting and reporting on Service Delivery standards and outcomes

Reporting requirements and outputs will be determined once the strategy, structure and short to medium term biosecurity planning objectives have been approved.