

Saving Marion Island's Seabirds™

The Mouse-Free Marion Project



Expressions of Interest for a Review of a Feasibility Study for the Mouse-Free Marion Project

09 February 2024

Introduction

The Mouse-Free Marion (MFM) Project is a project established as a partnership between BirdLife South Africa (BLSA) and the South African Department of Forestry, Fisheries and the Environment (DFFE).

The objective of the project is to eradicate invasive house mice (*Mus musculus*) from Marion Island.

Marion Island (30,000 ha) is one of the two islands that comprise the Prince Edward Islands, located in the southern Indian Ocean some 1,900 km south-east of South Africa. The islands are gazetted as a Special Nature Reserve and are surrounded by a large Marine Protected Area.

Mice were accidentally introduced by sealers early in the 19th Century. Over the past 25 years, as mice have significantly reduced invertebrate biota and a drying climate has favoured mouse breeding conditions, densities of mice have increased. Evidence of mice attacking seabirds has been gathered over the past 20 years and such attacks are now commonplace. Mouse attacks on burrowing petrels and prions as well as giant petrels and four species of albatross have been recorded.

The eradication of mice from Marion Island is considered a critical intervention to safeguard the viability of these globally important seabird populations.

A Feasibility Study undertaken in 2015 identified a number of challenges but concluded that eradication of mice from Marion Island was feasible.

The MFM Project intends to eradicate mice from Marion Island by distributing bait containing a second-generation anticoagulant toxin from under-slung helicopter buckets. The timing for project implementation is not yet finalised, and is pending on both sufficient funds being raised, and all of the requisite regulatory approvals and procurement processes being completed. The implementation phase is unlikely to occur before 2026 or possibly 2027.

Funding for the MFM Project will be primarily from donations, with the South African government contributing support from DFFE (use of the South African government's Antarctic research vessel, *S.A. Agulhas II* to support the operation, the provision of fuel requirements, supporting long-term monitoring efforts, amongst others).

Marion Island will be the largest rodent eradication to be attempted in a single operation (South Georgia, while larger, was completed in three phases, each two years apart) and the largest where mice are the sole target species. A larger project still – Auckland Island, targeting mice, pigs and cats – is in the planning stages and has completed a feasibility study, but the project is not currently funded.

MFM Planning Progress

Planning for the MFM Project has been underway since a Feasibility Study was undertaken in 2015.

In 2018, a Draft Project Plan and Draft Operational Plan were prepared, and both documents have been revised since 2021.

A document outlining eradication project activities relative to provisions in the Prince Edward Islands Management Plan (PEIMP) was prepared in 2021, and has since been adapted to provide the basis for environmental assessment of the project and secure the necessary environmental authorisations – a process that is still on-going.

A number of trials have been conducted on Marion Island, including work in 2018, 2022 and 2023. Trials have investigated captive management of sheathbills (a non-target species at risk of mortality due to bait or toxic invertebrate consumption), palatability of bait to mice using various toxin concentrations, bait uptake and bait availability, and attractiveness of bait to (non-native) slugs.

A specialist Advisory Panel on Non-Target Species has evaluated the potential impacts of the intended operational method on non-target species and provided advice on possible mitigation measures.

A submission to the DFFE has resulted in approval for the project from the department's Marine Animal Ethics Committee.

An Expression of Interest document for the procurement of aerial services to implement the project has been prepared, but given the decision (in September 2023) to defer the operational year, has not yet been released.

Throughout, fund-raising has been a focus and has continued as an embedded part of the project workload.

A Monitoring Plan (baseline ecological data) has largely been completed and is being implemented by university institutions and DFFE staff, with support from the MFM Project.

Project structure

The MFM Project is a function of a partnership between BLSA and the DFFE, which was established by means of a Memorandum of Understanding (MoU). The MFM Project is overseen by a Project Steering Committee. BLSA established the Mouse-Free Marion Non-Profit Company (NPC) to fulfil its obligations with respect to the MoU. The NPC is overseen by a Board, and MFM Project staff are employed by the NPC.

In terms of staffing, the project team currently comprises seven; a Project Manager, Assistant Project Manager, Operations Manager, Communications Officer & Project Assistant, Development Officer, News Correspondent (a voluntary position) and an Admin and Finance Officer. A contract Fundraising Manager role has recently concluded and discussions are currently underway to consider revisions to

the MFM Fundraising Strategy and the management structure to support it. The MFM Project is also supported by a number of staff within the DFFE and BLSA.

Several committees oversee various functional and governance roles, including the Project Steering Committee (which provides the overall governance function for the project), the NPC Board, an Audit and Risk Committee (of the Board), Fundraising Committee, Management Committee, Communications Committee and a Scientific and Technical Advisory Group.

The MFM Project Plan outlines the management and governance aspects of the project.

The MFM Project has employed a Research Assistant for the 2022/23 and 2023/24 years, , who deploys to the island in April of one year and returns in May the following year. This position is also intended to be filled for the 2024/25 year. Within the constraints of not being able to undertake solo field work on Marion Island, this position is the only current staff resource available to undertake any trials that are embarked upon, that are outside of the annual changeover period. During the annual changeover period in early-April to mid-May, up to two additional MFM Project staff may be on the island for approximately three weeks.

Feasibility Study

It is now nine years since the initial Feasibility Study was prepared, following a visit to Marion Island by John Parkes, in 2015.

Since that time, a number of island eradication projects have been conducted, including of house mice as the target species. These have included Antipodes Island (2016), Gough Island (2021) and Midway Atoll (2023). Of these three, only Antipodes Island was successful. Also during that period, other refinements in strategy and eradication methodology have evolved.

Since the formal establishment of the Mouse-Free Marion Project in 2021, project planning (as described under the MFM Project Planning section) has progressed and a number of trials undertaken. This planning work has resulted in knowledge gained that would inform a Feasibility Study, that were not available at the time the initial Feasibility Study was prepared. Put another way, more relevant information is known now, that was not available then.

Particularly in light of recent failures of mouse eradications, and in the light of advice from peers in the international eradication community, the MFM Project considers it worthwhile to review the 2015 Feasibility Study. This will provide a current check to gauge whether planning is proceeding in an appropriate direction to have the best chance of achieving mouse eradication on Marion Island.

Expression of Interest

This call for Expressions of Interest (EOI) seeks submissions from suitably experienced and qualified eradication practitioners to review and, if warranted, to revise the Mouse-Free Marion Project Feasibility Study.

‘Suitably experienced’ means practitioners with an extensive background in eradication projects, especially those involving mice as the target species and using aerial application of rodenticide bait from helicopters as the delivery mechanism.

MFM is open to submissions involving a collaborative approach, recognising that eradication practitioners often have different strengths and that a collaboration may offer a more robust Feasibility Study.

Brief for a Reviewed MFM Feasibility Study

Your EOI submission should incorporate the following considerations, which reflect that the intent of the review process is to focus on reviewing existing documents, rather than preparing a new Feasibility Study from scratch.

1. Review the 2015 Feasibility Study prepared by John Parkes in 2015 in its entirety.
2. Previous trials undertaken from 2018 to 2023 should be reviewed and results accounted for in the revised Feasibility Study.
3. Incorporate the current Operational Plan, especially the baiting strategy.
4. Review of Marion Island average annual weather conditions available through the South African Weather Service.
5. Consider the Project Governance and Management aspects of the project as detailed in the MFM Project Plan.
6. Preparation of the Feasibility Study review will include discussions with MFM Project staff on an on-going basis.
7. In conjunction with MFM Project staff, consider discussion points and findings from a Mouse Eradication Workshop held in New Zealand in 2023 (proceedings not yet collated).
8. Incorporate information from the Non-Target Advisory Panel Report.
9. Consider the robustness of biosecurity at key operational sites to prevent future reinvasions.
10. Consider whether use of a 5.5 mm bait product has any merit over a 'standard' 10 mm pellet, and if so what advantages and disadvantages are identified, and any trials (on- or off-island) that may inform whether this bait product further consideration.

Output

The desired output is a revised Feasibility Study assessing the feasibility of eradicating mice from Marion Island.

Supporting documents

A number of relevant background documents will be provided to the successful applicant to inform the review of the Feasibility Study.

These include (but are not restricted to):

- 'Eradication of House Mice *Mus musculus* from Marion Island: a review of feasibility, constraints and risks' (John Parkes, 2015) – the original feasibility study.
- Draft MFM Project Plan.
- Draft MFM Operational Plan.
- Non-Target Species Advisory Panel Report.
- Marion Island Research Programme (G. McClelland, 2016).
- Compendium of research papers pertaining to mouse biology on Marion Island.

- A summary of trials already undertaken on Marion Island to inform mouse eradication, with trial reports (where available).
- Information on Mouse Eradication Workshop held in NZ in November 2023 (when available).
- A digital topographic map of Marion Island.
- NZ Dept of Conservation IEAG feedback to MFM.
- NZ Dept of Conservation document – ‘Eradication feasibility assessment. Current agreed best practice template (Version 1.2)’.

Contact Person

Any issues and discussion during the course of reviewing the Feasibility Study for the MFM Project should be directed to Anton Wolfaardt, MFM Project Manager, at anton.wolfaardt@birdlife.org.za phone +27 (71) 6229678.

Submission and closing date

You should submit your EOI document to Anton Wolfaardt, MFM Project Manager by email to anton.wolfaardt@birdlife.org.za no later than 5pm (South Africa Standard Time) on 26th February 2024.

If you are considering submitting an EOI, please register your intention with Anton Wolfaardt, at anton.wolfaardt@birdlife.org.za. This will enable us to notify all interested parties of any changes to the submission date.

Your submission should include the following details:

- The primary contact person (for administrative purposes and contract payments)
- A nominated lead person for the Feasibility Study and any other nominated person who will be involved in the development of the Feasibility Study
- A draft framework for preparation of the Feasibility Study, including collaboration with Mouse-Free Marion staff (in other words, how do you propose structuring the work?)
- For each nominated person:
 - Name and contact details.
 - A *Curriculum Vitae* containing academic qualifications and relevant previous experience upon which to base the preparation of the required document.
 - Whether a field visit to Marion Island is considered a requisite part of your submission and if so, whether you are available to participate in a voyage in April/May 2024 (5 weeks) – see section below.
 - A timeframe for undertaking the contract with milestones noted.

A pricing schedule with indicative costs and timing of progress payments, to be invoiced to the MFM Project.

Timeframe

Feasibility Study

The timeframe to guide the Feasibility Study Review completion will be finalised with the contractor, with an initial guide outlined in the table below.

Action	Key Dates for Feasibility Study
Distribution of EOI document	9 th February 2024
Closing date for receipt of EOI submissions	26 th February 2024
Notification to EOI submitters	8 th March 2024
Contract signed for delivery of requested services	13 th March 2024
Background documentation sent to selected contractor	13 th March 2024
Draft framework for Feasibility Study submitted to MFM	19 th March 2024
<i>Vessel departs Cape Town for Marion Island</i>	<i>11th April 2024</i>
<i>Vessel returns to Cape Town from Marion Island</i>	<i>14th May 2024</i>
Draft Feasibility Study submitted	27 th May 2024
Draft Feasibility Study circulated for peer review	31 st May 2024
Peer review of Draft Feasibility Study received	12 th June 2024
Peer review feedback circulated to authors	17 th June 2024
Final Feasibility Study submitted	26 th June 2024

Visiting Marion Island

Time is now extremely tight to consider participation on the annual changeover voyage to Marion Island, and berths to enable this have not been requested of DFFE. In your submission, you should state whether you consider visiting Marion Island to progress the Feasibility Study Review as necessary, desirable or not necessary.

Due to the scarcity of berths on the vessel and the late timeframe, the MFM Project cannot offer any guarantees that a visit, if considered necessary or desirable, will be possible.

Your submission should also outline whether you consider a visit to South Africa necessary, in order to undertake discussions with MFM and DFFE staff, or whether the review can be conducted with discussions occurring on-line.