

Te Pēwhairangi (Bay of Islands) Marine Mammal Sanctuary Review

March 2025



Bottlenose dolphins © DOC

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Executive summary

1. Te Pēwhairangi (Bay of Islands) Marine Mammal Sanctuary (the Sanctuary) was established in 2021 to reduce the high levels of vessel and human interaction with marine mammals.
2. The restrictions within the Sanctuary are:
 - people must keep out of the water within 300m of all marine mammals;
 - vessels must maintain a 300m distance from all marine mammals (dolphins, whales, seals);
 - vessels must stop if the person in charge becomes aware of any marine mammal closer than 300m and remain stopped until any marine mammal is farther away than 300m; and
 - vessels must observe a 5-knot speed limit in two marine mammal safe zones.¹
3. The Department of Conservation (DOC) Northern North Island Regional Operations team and the Bay of Islands District Operations team have primary responsibility for managing the Sanctuary.
4. Bottlenose dolphins are an indicator species, one whose presence and use of the Bay of Islands provides information about the condition of the Bay of Islands marine environment.²
5. DOC undertook a desktop review in 2024 to evaluate how well Sanctuary restrictions are working, and to make management recommendations based on the evaluation. The National Marine Protection Programme team was tasked with conducting the review, with the support of the DOC Bay of Islands District Operations team, and the Marine Species team.
6. The review focused on implementation of Sanctuary restrictions, successes, and challenges.
7. DOC regularly engages in advocacy and enforcement of the Sanctuary restrictions, especially during the summer months. One DOC ranger carries out enforcement patrols during the busy season. Patrol days and resourcing are limited in the shoulder seasons. There appears to be a low rate of compliance with the Sanctuary rules, which has been observed during on-water patrols and by an autumn 2024 study conducted by the Far Out Ocean Research Collective (Far Out) and the National Institute of Water and Atmospheric Research Ltd. (NIWA).

¹ Persons with 'lawful authority or reasonable excuse' are exempt from speed and distance rules and marine mammal viewing permit holders are exempt from the vessel distance rule.

² DOC, [Te Pēwhairangi \(Bay of Islands\) Marine Mammal Sanctuary](#). Last visited 4 Feb. 2025.

8. For various reasons, the governing Rōpū has not met regularly since 2021, and robust co-governance and co-management of the Sanctuary is yet to be implemented.

Key findings

9. To implement the restrictions, DOC conducts outreach and advocacy via in-person meetings with tour operators, encounters with the public, and engagement with local media. DOC distributes guidance to visitors, maintains signage at boat ramps and marinas, and marks safe zones with buoys.
10. DOC conducts on-water patrols according to the Bay of Islands Marine Compliance plan,³ focusing resources on the busy summer season.
11. Ngā Hapū o Pēwhairangi participated in management decisions and Sanctuary field trips in the summer of 2021 and 2022. Rōpū members have also joined Sanctuary patrols. In addition, DOC provided compliance training for 21 students through the Jobs for Nature programme.
12. Implementation challenges include resourcing, low compliance rates, and difficulties achieving a quorum at Te Pēwhairangi (Bay of Islands) Marine Mammal Protection Advisory Committee Rōpū (the Rōpū) meetings, which has affected the ability of the Rōpū to fully realise co-governance and co-management of the Sanctuary.
13. Due to the short time since establishment of the Sanctuary, it is not possible to evaluate long-term demographic changes of bottlenose dolphins in response to Sanctuary restrictions. Likewise, there is insufficient data available to compare dolphin behaviour before and after the Sanctuary was established, preventing any conclusions about how Sanctuary restrictions have affected dolphin behaviour.
14. A 2024 study on bottlenose dolphin demographics and Sanctuary compliance found:
 - multiple periods of significant decline in the local abundance of bottlenose dolphins occurred between 1994 and 2024, reaching the lowest point of 16 individuals in spring 2019
 - local abundance for autumn of 2024 was estimated at 40 individuals
 - ongoing high calf mortality, with some improvement in recent years
 - areas of highest importance for the bottlenose dolphins in the Bay of Islands have remained relatively stable over multiple decades, but generally do not include the safe zones of the Sanctuary

3 See Bay of Islands Marine Compliance Plan 2024-2025.

- compliance with the Sanctuary rules was very high for commercial operators holding a marine mammal permit, but poor for other vessel types, except that all vessels complied with the Sanctuary rule prohibiting swimming with marine mammals.

Key recommendations

15. To better protect marine mammals in the Sanctuary, we recommend that the DOC Bay of Islands District Operations team, with the support of the Marine Species team:
 - resets the Rōpū and re-engages members in on-going decision-making and management activities
 - plans for and installs new, larger buoys to mark safe zones
 - utilises more of the Sanctuary budget and resources to expand compliance efforts, including on-water patrols in the shoulder seasons each year (March to May and September to November)
 - provides advance notice of patrols so Kaitiaki Rōpū and hapū members can regularly join patrols
 - revises and implements the Bay of Islands Marine Compliance Plan
 - undertakes regular population surveys and monitoring to assess key metrics of bottlenose dolphin population health including calf survival and number of dolphins using the Sanctuary, and includes opportunities for mātauranga Māori⁴
 - works with the Rōpū to determine the timing and scope of future reviews of the Sanctuary.

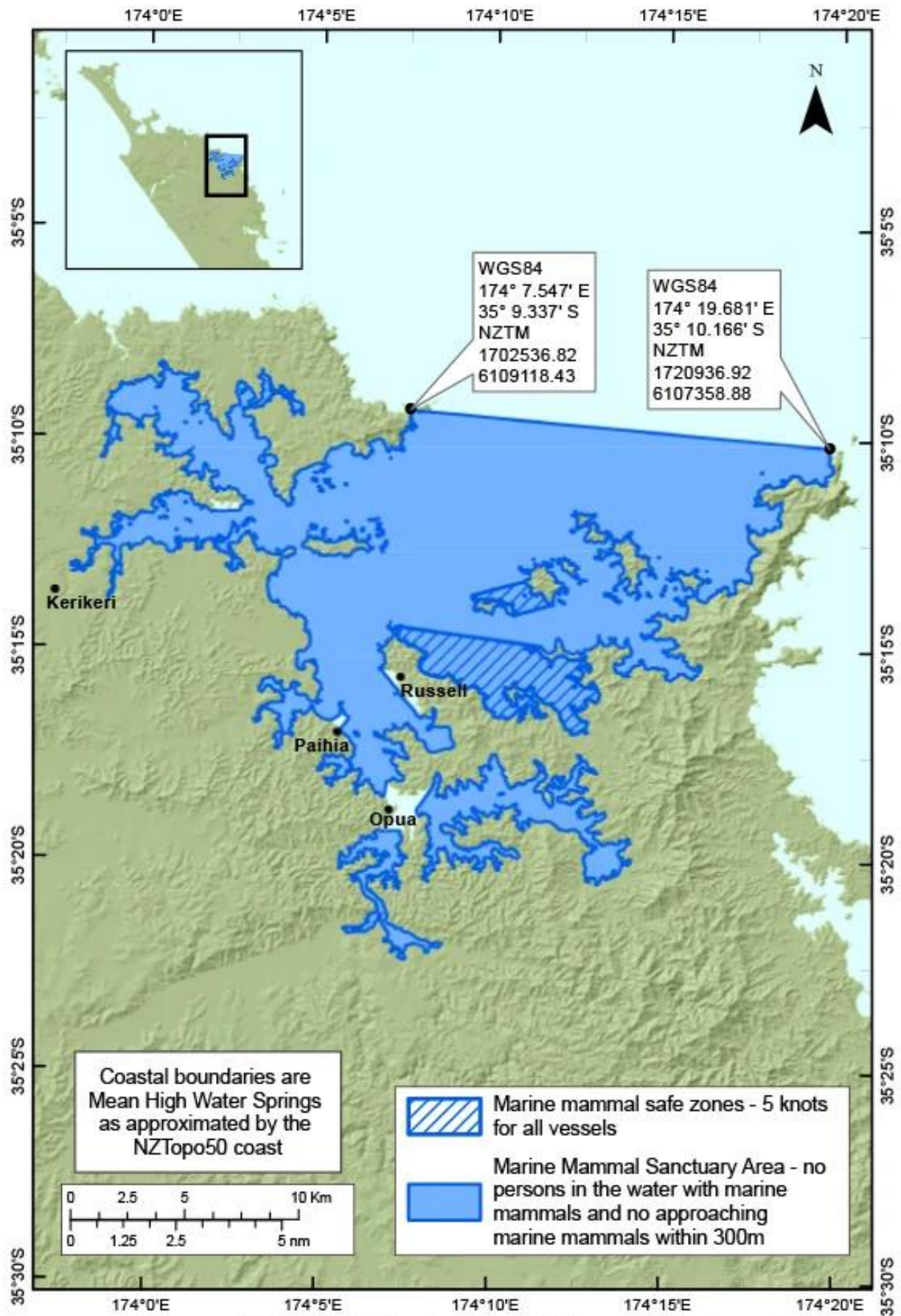
⁴ The Marine Species team would lead implementation of this recommendation.

Purpose

16. The purpose of this review is to evaluate how well Te Pēwhairangi (Bay of Islands) Marine Mammal Sanctuary (the Sanctuary) is working to protect marine mammals, and to make management recommendations based on the evaluation.

Background/context

17. The Sanctuary was established in 2021 to reduce the high levels of vessel and human interaction with marine mammals. Research had shown vessel interactions with endangered bottlenose dolphins were disrupting normal behaviours critical for survival, such as resting and feeding, and the number of dolphins using the area was declining over time.
18. The Sanctuary was declared by the Minister of Conservation and gazetted on 17 November 2021, following the advice and recommendation from DOC. The Sanctuary came into effect on 15 December 2021. The Minister of Conservation made the decision to establish the Sanctuary with the consent of the Minister for Oceans and Fisheries and the Minister of Energy and Resources. The Minister of Conservation agreed to review the Sanctuary three years after it was established (i.e., by December 2024).



**Map of Te Pēwhairangi (Bay of Islands)
Marine Mammal Sanctuary**

The impetus for establishing the Sanctuary

19. The Sanctuary was developed in response to research detailing changing behaviours and declining numbers of Te Pēwhairangi marine mammals, specifically the bottlenose dolphin, indicating high levels of vessel interactions as a key driver.
20. The Sanctuary was established on 15 December 2021, following extensive public engagement, which included a 28-day statutory submission period from 20 April 2021 to 18 May 2021, in accordance with section 22 of the Marine Mammals Protection Act 1978 (the MMPA). Prior to the public submission process, DOC consulted with the public to develop and refine options for the Sanctuary.⁵ Review of the Sanctuary was discussed during stakeholder engagement both before and after declaration of the Sanctuary.
21. DOC's advice to the former Minister of Conservation identified three key aspects, or pou, to implementation of the Sanctuary:
 - co-governance and co-management
 - communication and engagement
 - staffing and equipment for on-water patrols.
22. The Sanctuary aims to limit vessel interaction and provide all marine mammals with areas of low distraction within which to undertake critical behaviours, including feeding and nursing. Restrictions are meant to protect all marine mammals, with the bottlenose dolphin being an indicator species for the wider range of marine mammals in the area.
23. The Sanctuary has introduced key restrictions for Te Pēwhairangi coastal waters, including:
 - people must keep out of the water within 300m of all marine mammals
 - vessels must maintain a 300m distance from all marine mammals (dolphins, whales, seals)
 - vessels must stop if the person in charge becomes aware of any marine mammal closer than 300m and remain stopped until any marine mammal is farther away than 300m
 - vessels must observe a 5-knot speed limit in two marine mammal safe zones⁶
24. These restrictions are in addition to existing restrictions on behaviour around marine mammals implemented under the Marine Mammals Protection Act 1978 and Marine Mammals Protection Regulations 1992.

Ngā Hapū o Pēwhairangi and establishment of the Sanctuary

25. The Sanctuary was designed in partnership with Ngā Hapū o Pēwhairangi, a collective of coastal hapū who exercise mana moana and kaitiakitanga over the coastal waters of Te Pēwhairangi.
26. Ngā Hapū o Pēwhairangi, together with DOC, were instrumental in the establishment of Te Pēwhairangi (Bay of Islands) Marine Mammal Protection Advisory Committee Rōpū (the Rōpū) and were key to the Sanctuary development.
27. Terms of Reference (TOR)⁷ for the Rōpū were partially executed⁸ on establishment of the Sanctuary and outline the agreed co-governance and co-management approach for implementation. Under the TOR, DOC has committed to working in partnership with Ngā Hapū o Pēwhairangi on management and monitoring of the Sanctuary. The TOR are specific about the role of the Rōpū in the review process.

⁵ This period ran from 23 July 2020 to 9 April 2021, see DOC Advice to the Minister of Conservation (18 Oct. 2021), Attachment B.

⁶ Persons with 'lawful authority or reasonable excuse' are exempt from speed and distance rules and marine mammal viewing permit holders are exempt from the vessel distance rule.

⁷ Terms of Reference DOC-6662306 (TOR).

⁸ They were not signed by all relevant hapū at the time.

Clause 3.1 states: 'The scope of works for the Rōpū include: Make operational management decisions relating to Te Pēwhairangi Marine Mammal Sanctuary ... including: Develop and undertake review of [the Sanctuary] in 2024 in accordance with allocated budget.'⁹

28. The Rōpū has met several times since establishing the Sanctuary in 2021 but has had difficulty achieving a quorum. This has impeded the ability of the Rōpū to make decisions and to be actively involved in Sanctuary management. We understand that since the Sanctuary was established, one hapū (Patukeha) that had supported the Sanctuary and signed the TOR, has provided notice that they no longer wish to continue with the Rōpū and that they no longer support or recognise the Sanctuary.

The review process

29. DOC advice to the former Minister of Conservation in October 2021 recommended a three-year review of the Sanctuary, along with other recommendations and guidance for implementation, to address themes and concerns raised in public submissions. These themes included:
- confusion about the practical interpretation of the proposed restrictions
 - education, monitoring and enforcement are essential for success
 - the stopping rule is impractical and unsafe
 - safe zones are unjustified and are unfair to residents
 - it is problematic to exempt commercial operators with viewing permits from the requirements to keep the [300 m] distance from marine mammals.
30. In light of these concerns, DOC advice identified implementation requirements "vital to the success of the proposed [Sanctuary]".¹⁰ These requirements included comprehensive education, outreach, and communications, and updating the research and monitoring programme to ensure the effectiveness of the Sanctuary could be monitored and assessed in three years.
31. Although we were able to assess many aspects of Sanctuary effectiveness, due to the short time since establishment, we limited our review to the operation and management of the Sanctuary. Dolphins breed slowly and take years to reach sexual maturity. Three years is not long enough to observe long-term demographic changes in response to Sanctuary restrictions. With respect to any behavioural changes, there is not enough data available to compare dolphin behaviour before and after the Sanctuary was established. Therefore, we are not able to draw any conclusions about how Sanctuary restrictions have affected dolphin behaviour.

Methodology

32. DOC determined that it would conduct a desktop review. A desktop review is based on available information and does not require the generation of new data or extensive data analysis. The process is consistent with Marine Protected Area review guidance developed by DOC's National Marine Protection Programme team, which is adapted from international best-practice guidance.¹¹
33. The key questions for review were:
- What restrictions are in place?
 - What has DOC been doing to implement the restrictions?
 - What challenges have there been?

⁹ TOR at 3.1.3.

¹⁰ DOC Advice to the Minister of Conservation (18 Oct. 2021), Attachment D.

¹¹ See Parks, John E., Pomeroy, R. S. (Robert S.), Watson, Lani M., 2004. How is your MPA doing?: a guidebook of natural and social indicators for evaluating marine protected areas management effectiveness. Several DOC teams function together to safeguard marine protected areas. DOC's Operations teams, with the support of its Marine Science team, Marine Ecosystem team, and others, manage these areas to ensure they meet objectives. The National Marine Protection Programme team conducts reviews on behalf of DOC to evaluate how successful DOC's efforts have been.

- Are the restrictions working to protect marine mammals?
34. To answer these questions, we considered several management aspects of the Sanctuary, including operational measures (education, signage and compliance), regulatory measures (speed limits and boundaries), the scope of scientific studies at the Sanctuary (current and new learning), and the strength of Treaty of Waitangi partnership (Treaty partner engagement and satisfaction (i.e., have Treaty partner aspirations been met?)).
35. Ten indicators were selected to answer these questions:
- availability and allocation of the Sanctuary administrative resources
 - degree of information dissemination to encourage stakeholder compliance
 - local understanding of the Sanctuary's rules and regulations
 - clearly defined enforcement procedures
 - enforcement coverage
 - level of compliance
 - populations of key or taonga species
 - existence and application of scientific research and input
 - level of Treaty partners, whānau, hapū, iwi in leadership positions with respect to management of the Sanctuary
 - level of Treaty partner rangatira (leadership) and kaitiaki (guardianship) participation in operational activities (e.g., monitoring, training).

Results

Evaluating the Indicators¹²

36. DOC regularly engages in advocacy and enforcement of the Sanctuary restrictions, especially during the summer months. Current resourcing includes one DOC ranger to carry out patrols during the busy summer season, and limited patrol days in the shoulder seasons.¹³ There appears to be a low rate of compliance with the Sanctuary rules, which has been observed during on-water patrols and was observed by an autumn 2024 study conducted by Far Out and NIWA.¹⁴ The Rōpū has met several times since establishing the Sanctuary in 2021 but has had difficulty achieving a quorum. This has impeded the ability of the Rōpū to make decisions and to be actively involved in Sanctuary management. Further details are set out below.

Regulatory measures: speed limits, boundaries, and budget

37. Sanctuary restrictions require people and vessels to maintain a 300-metre distance from marine mammals, stop their vessel if marine mammals are too close, and restrict vessel speed to 5 knots in two safe zones (see map above).
38. To enforce the Sanctuary restrictions, DOC has developed and followed a Bay of Islands Marine Compliance Plan since 2021. All warranted officers adhere to DOC Compliance and Law Enforcement Standard Operating Procedures and DOC's Compliance and Enforcement Policy. DOC enforces the Sanctuary rules through on-water patrols, and monitoring AIS – an automatic vessel identification system.

¹² See Appendix 1 for an assessment of the indicators.

¹³ Shoulder seasons are March to May and September to November annually.

¹⁴ NIWA, 2025 Update on the population and spatial ecology of bottlenose dolphins in the Bay of Islands.

39. The DOC Bay of Islands District Operations team coordinates with Fisheries New Zealand, Northland Regional Council and New Zealand Police over the summer. For example, if those agencies observe violations of the Sanctuary rules, they stop the offender and advise them of the rules.
40. Advocacy and enforcement are primarily carried out by a DOC Ranger with support from the Bay of Islands District Operations team and a contract skipper as required. A fit for purpose vessel is used, equipped with GPS, Radar, and AIS.
41. The Sanctuary work programme is funded through the Northern North Island Operational Budget. Costs include buoy maintenance, compliance costs, Rōpū meetings, skipper contractors, signage, and radio messaging. Since the Sanctuary was established, scientific research has been funded by Bay of Island concessions fees and by DOC's Biodiversity Budget. These funding sources are not reflected in the table below. Annual Operational funding allocation and expenditure for the Sanctuary work programme is outlined below.

| Financial year | Budget | Expenditure |
|----------------|---------------------------|------------------------|
| FY22/23 | \$150,000 (cost pressure) | \$82,308 |
| FY23/24 | \$65,000 | \$25,384 |
| FY24/25 | \$64,995 | \$25,600 ¹⁵ |

42. In the three years since establishment of the Sanctuary, the District has prioritised summer patrols, education and advocacy. In future years, there is an opportunity to utilise more of the Sanctuary budget to expand compliance efforts, including on-water patrols in the shoulder seasons to address compliance issues.

Operational measures: education, signage and compliance

43. DOC Bay of Islands staff regularly engage with permitted marine mammal viewing tour operators, boating clubs, and other event organisers about the Sanctuary restrictions. In addition, staff hold annual meetings with tour operators. During the summer, DOC uses radio messaging on both commercial radio stations and the marine radio, and issues media releases to educate the public about the Sanctuary rules. Advocacy materials include brochures for both kids and adults, Sanctuary boundary maps and a Sanctuary user guide.
44. DOC signs at the main access points to the Sanctuary, including 19 boat ramps and three marinas, explain the Sanctuary rules. Buoys mark safe zones. Initially, there were five buoys but two were lost in a cyclone and one was destroyed when it was run over by a vessel, leaving one buoy to mark each safe zone. DOC recently learned from the Regional Harbour Master from Northland Regional Council that larger buoys are required because the current buoys are too small and pose a navigational hazard. DOC plans to pursue capital expenditure funding for the new, larger buoys.
45. In the peak summer season (December-January), one full-time ranger is allocated to on-water patrols and administrative follow-up. This amounts to four-five days on the water per week for one warranted officer and one skipper, and one day in the office, if feasible, over the two months. Patrols are weather dependent, and DOC prioritises long weekends, weekends, organised events, and cruise ship days. In February, patrols occur three days per week.
46. For the remainder of the year (March – November), DOC allocates one to two days on the water per month. If DOC observes marine mammals in the Sanctuary while on patrol, DOC follows them from 300

15 Figure is based on data through 3 February 2025. Total expenditures for FY24/25 will be available in mid-2025.

metres or more within the Sanctuary boundaries and records evidence if vessels or persons are not complying with distance or speed restrictions.

47. DOC records all compliance incidents in an app called CLE Works. Per patrol, DOC may have between 0-50 interactions with members of the public, with 95% of them positive. Since 2021, DOC has approached and spoken with people on approximately 170 vessels that were in breach of the Sanctuary restrictions. Number of offences recorded since establishment:

| Year | Recorded Offences |
|---------|-------------------|
| 2021/22 | 37 |
| 2022/23 | 50 |
| 2023/24 | 85 |

48. The number of offences recorded in 2021/2022 is likely fewer than in 2022/2023 and 2023/2024 because Auckland had just come out of Covid lockdown and because the weather was poor, resulting in fewer people using the Sanctuary.
49. DOC has not issued infringement notices or attempted to prosecute any offenders since establishment of the Sanctuary to allow time to educate the public about the Sanctuary rules and restrictions.
50. Our evaluation indicates compliance rates are higher when DOC rangers are on the water. Currently one ranger is responsible for performing four to five compliance patrols per week over the busy summer period. In the shoulder season there are one to two compliance patrols on the water per month. Our assessment is that compliance would improve if there were more consistent patrols throughout the year.
51. We recommend that budgets and resources be used to increase compliance efforts during the shoulder seasons and to implement the Sanctuary programme more comprehensively. This could include, for example, responding to wildlife emergencies, monitoring marine mammals, conducting on-the-water patrols throughout the year, and conducting targeted advocacy, especially with unpermitted vessel operators.

Scientific studies and research

52. Two studies on bottlenose dolphins have informed this review, the first published in 2022,¹⁶ and the second finalised in March 2025.¹⁷
53. The 2022 report concluded that while the percentage of time vessels were present around bottlenose dolphins was less than in earlier studies, the decline in the number of bottlenose dolphins using Bay of Islands waters appeared to be ongoing and calf survival rates remained poor.
54. The 2024 study¹⁸ used data collected by all research groups active in the area since the 1990s to update population demographics for bottlenose dolphins in the area and reported on commercial and recreational vessel compliance with the rules of the Sanctuary. Major findings from this study include:
- multiple periods of significant decline in the local abundance of bottlenose dolphins occurred between 1994 and 2024, reaching the lowest point of 16 individuals in spring 2019

16 TriOceans Marine Research and Technology Institute, Bay of Islands marine mammal data collection (Aug. 2022).

17 NIWA, 2025 *Update on the population and spatial ecology of bottlenose dolphins in the Bay of Islands*.

18 The study was carried out between March and May 2024, with 20 days of fieldwork.

- local abundance for autumn of 2024 was estimated at 40 individuals
 - calf mortality remains high compared to other populations but has improved somewhat in recent years, i.e., more calves are surviving their first 2 years
 - areas of importance for the bottlenose dolphins in the Bay of Islands have remained relatively stable over multiple decades
 - during the 2024 study period, bottlenose dolphins were not sighted in the safe zones of the Sanctuary and acoustic monitoring indicated they use these areas infrequently, at least during the time of year where data was collected
 - compliance with the Sanctuary rules was very high for commercial operators holding a marine mammal permit, but poor for other vessel types, including commercial operators who do not hold a marine mammal permit (>80% of recreational vessels did not comply with distance restrictions and >75% of power-driven vessels did not comply with the 5-knot speed restriction in safe zones)
 - all vessels complied with the Sanctuary rule prohibiting swimming with marine mammals.
55. In addition to the two studies, marine mammal and vessel interactions are observed during DOC patrols. Based on these observations, the total number of vessel interactions annually is likely high.
56. To further inform Sanctuary management, we recommend regular population surveys and monitoring to assess key metrics of bottlenose dolphin population health, including calf survival and number of dolphins using the Sanctuary.

The Treaty of Waitangi partnership

57. Ngā Hapū o Pēwhairangi participated in management decisions and Sanctuary field trips in the summer of 2021 and 2022. In addition, DOC provided compliance training for 21 students through the Jobs for Nature programme. In the past, Rōpū members have joined patrols. Currently, no Rōpū members are involved in monitoring or training activities or in leadership positions associated with monitoring or training activities. There are several factors affecting involvement, including individuals' capacity to participate, changes in Rōpū representatives, and supervision requirements, which, because of DOC's health and safety obligations, are resource intensive.
58. In July 2024, hapū representatives on the Rōpū supported a desktop review of the Sanctuary and stated their expectation that they would be included in scoping the extent of the review and providing input into the review. They suggested a review of the TOR simultaneously, including how to ensure participation. They suggested the review take place with hapū input, on the marae, with remuneration for participants. They asked for the review to include a discussion of opportunities that the Sanctuary presents and the technology available to support education, awareness and understanding of the Sanctuary.
59. Due primarily to time limitations, hapū representatives on the Rōpū were not included in scoping the review. On 10 January 2025, the Rōpū convened at the DOC office in Kerikeri to discuss the review and provide feedback on the findings and recommendations.
60. Hapū representatives emphasised the importance of adequate resourcing to support compliance and patrols, alongside education and outreach efforts that kaitiaki can help drive. They expressed their interest in Kaitiaki Rōpū and hapū members regularly joining patrols, and their support for dolphin population surveys and monitoring that include opportunities for mātauranga Māori. Hapū representatives also highlighted the importance of updating the TOR to help ensure their engagement aligns with the TOR in the future. DOC's Bay of Islands District Operations team agreed with the need to revisit the TOR.
61. Hapū representatives recommended collaboration with the Harbour Master, the Ministry for Primary Industries, the Council, and others, to enhance protection and reduce interactions in safe zones and

navigation lanes, especially to protect dolphin “hotspots” and at critical times such as calving. To strengthen communication and the visibility of kaitiaki, they suggested an increased hapū presence on social media, storytelling, citizen science initiatives, and dolphin advocacy events.

Recommendations

62. Although we are not able to draw any conclusions about how Sanctuary restrictions have affected dolphin demographics or behaviour over the last three years, we can conclude that DOC has succeeded in prioritising on-water patrols and advocacy during summer – the busiest season. DOC has faced challenges, however, in enforcing Sanctuary restrictions throughout the year and in sustaining both the work of the Rōpū and ongoing research.
63. Our evaluation indicates compliance is higher when DOC rangers are on the water. We recommend that future budgets and resources be used to increase compliance efforts throughout the year and to implement the Sanctuary programme more comprehensively.
64. To better protect marine mammals and to meet DOC’s commitment to co-govern and co-manage the Sanctuary with the Rōpū, we recommend that the DOC Bay of Islands District Operations team, with the support of the Marine Species team:
 - resets the Rōpū and re-engages members in the Sanctuary decision-making and management activities
 - provides advance notice of patrols so Kaitiaki Rōpū and hapū members can regularly join patrols
 - plans for and installs new, larger buoys to mark safe zones
 - utilises more of the Sanctuary budget and resources to expand compliance efforts, including on-water patrols in the shoulder seasons
 - revises and implements the Bay of Islands Marine Compliance Plan, consistent with DOC’s Enforcement and Prosecution Policies¹⁹
 - undertakes regular population surveys and monitoring to assess key metrics of bottlenose dolphin population health including calf survival and number of dolphins using the Sanctuary, and includes opportunities for mātauranga Māori²⁰
 - works with the Rōpū to determine the timing and scope of future reviews of the Sanctuary.

Next Steps

65. DOC’s District operations team will share the final report with the Rōpū and other interested stakeholders. The District Operations team will lead development of an implementation plan to ensure DOC considers and adopts recommendations, as feasible.²¹ The final report will be published on the DOC website.

¹⁹ See [DOC’s law enforcement policies](#).

²⁰ The Marine Species team would lead implementation of this recommendation.

²¹ DOC’s implementation of recommendations is subject to DOC funding, resourcing constraints and Government priorities, which may change over time.

Appendix 1: Assessment of Indicators

| Indicators | To Assess | Questions and Answers + any relevant links to data sources |
|---|-----------|---|
| Assess the existence and application of scientific research and input | | <p>What scientific studies have occurred at the marine mammal sanctuary (Sanctuary) since 2021?</p> <p><i>Two studies on bottlenose dolphins have occurred in the Sanctuary since its creation in December 2021:</i></p> <ul style="list-style-type: none"> • <i>TriOceans monitoring – March-August 2022</i> • <i>NIWA/Far Out Ocean Research monitoring and long-term analyses – March-May 2024</i> |
| | | <p>How have the data/results/conclusions from scientific research been applied at the Sanctuary?</p> <p><i>Neither of the studies above have resulted in changes to the Sanctuary or management within it. The first study was only a few months after the Sanctuary was created and the report of the second study was only finalised in November 2024. Thus, this review is the first time the results will be considered with respect to potential changes to the Sanctuary. Dolphins breed slowly and take years to reach sexual maturity. Three years is not long enough to observe demographic changes in response to Sanctuary restrictions, i.e., scientific studies will not tell us whether the Sanctuary is effective for some time.</i></p> |
| Summarise the results of current and new learning that has occurred at the SANCTUARY since 2021 | | <p><i>The TriOceans 2022 report concluded that while the percentage of time vessels were present around bottlenose dolphins was less than in earlier studies, the decline in the number of bottlenose dolphins using Bay of Islands waters appeared to be ongoing and calf survival rates remained poor.</i></p> <p><i>The NIWA/Far Out Ocean Research 2024 report used data collected by all research groups active in the area since the 1990s to update population demographics for bottlenose dolphins in the area, plus reported on commercial and recreational vessel compliance with the rules of the Sanctuary. Major findings included:</i></p> <ul style="list-style-type: none"> • <i>multiple periods of significant decline in the local abundance of bottlenose dolphins occurred between 1994 and 2024, reaching the lowest point of 16 individuals in spring 2019</i> • <i>local abundance for autumn of 2024 was estimated at 40 individuals</i> |

| Indicators | To Assess | Questions and Answers + any relevant links to data sources |
|--|------------------------|--|
| | | <ul style="list-style-type: none"> • calf mortality remains high compared to other populations but has improved somewhat in recent years, i.e. more calves are surviving their first two years • areas of importance for bottlenose dolphins in the Bay of Islands have remained relatively stable over multiple decades • bottlenose dolphins were not sighted in the 'safe zones' of the Sanctuary and acoustic monitoring indicated they only use these areas infrequently, at least during the time of year where data was collected • compliance with the Sanctuary rules was very high for commercial operators holding a marine mammal permit, but poor for other vessel types • all vessels complied with the Sanctuary rules prohibiting swimming with marine mammals. |
| Describe data gaps that, if addressed, would allow DOC to better assess the effect of speed and distance restrictions on bottlenose dolphins | | <p><i>It is unlikely that we will be able to specifically assess the effect of speed and distance restrictions on the bottlenose dolphins. Rather, by undertaking regular population monitoring we will be able to assess key metrics of population health: calf survival and number of dolphins using the Sanctuary area. These metrics will reflect effectiveness of the entire package of protection measures: (primarily restrictions on tourism operators and Sanctuary restrictions), compliance/enforcement, and education/outreach. Alternatively, if we wish to evaluate the potential effectiveness of different management options (e.g. moving safe zones to cover areas most used by bottlenose dolphins, creating no-go zones, etc.), a modelling exercise could be undertaken to estimate the effect on key parameters such as % of time dolphins spent interacting with vessels, changes to dolphin behavioural budgets, and so forth.</i></p> |
| Availability and allocation of Sanctuary administrative resources | Funding for operations | <ol style="list-style-type: none"> 1. What is the number of staff assigned to the programme? 1FTE Ranger Marine Biodiversity (400/01250/1) see Organisational Chart & Role Descriptor. Plus support from BOI team as required with skippering and advocacy. Organisational chart Role Descriptor 2. What is the number of non-DOC staff assigned to the programme? Contract skipper over summer 23/24 to deliver patrols as have had limited capacity and capability within the team. Currently preparing contract for 24/25 |

| Indicators | To Assess | Questions and Answers + any relevant links to data sources |
|---|--|--|
| | | <p>Skipper contract Dec23-March 24</p> <p>3. What kind/level of training is provided to management and staff? <i>Training – safety (CERT training), compliance (warranted officer), radar and skipper-based training relevant to role (DOCLearn)</i></p> <p>4. What is the budget for the activity? <i>Budget – 24/25 \$64995.00 see NNI Budget FY25 – Summary, expenses tab, BOI Opex Sanctuary is loaded to IOO 1.3 Opex, 9210991 -FLO00036679</i> <i>Budget - 23/24 was \$65,000</i> <i>Budget – 22/23 \$150,000 run as a regional cost pressure</i> NNI Budget FY25 - Summary</p> <p>5. What equipment is available (boat, GPS, etc.)? <i>Equipment – Vessel (Ranger II) with GPS/Radar/AIS system installed in 2024, Buoys to mark safe zones boundaries, signage at boat ramps/marinas.</i></p> <p>6. What is the age and condition of the equipment used? <i>Vessel Ranger II – 33 years</i> <i>GPS system – 1 year</i> <i>Buoys – 3 yrs need replacement due to cyclone damage with new more visible buoys</i></p> <p>7. What is the level of equipment maintenance? <i>Vessel is maintained regularly as per DOC protocols</i> <i>Buoys are maintained once a year by contractor</i></p> <p>8. What record keeping procedures are used? <i>Record keeping of Vessels through DOC's Maritime Operator Safety System (MOSS).</i> <i>Record keeping re CLE see below.</i></p> |
| Degree of information dissemination to encourage stakeholder compliance | Compliance with speed limits and boundaries (measures the number and effectiveness of capacity-building efforts for stakeholders on the objectives and benefits, | <p>9. How large is the capacity-building and information dissemination budget? <i>DOC staff time used to train/inform tour operators and others.</i></p> <p>10. Were capacity-building activities provided during planning for the Sanctuary on rules, regulations and enforcement arrangements?</p> |

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| | rules, regulations and enforcement arrangements of the Sanctuary) | <p>Information held by establishment team Cat Peters, Philip Duffy and Olivia Eaton. Yes. See DOC Advice to the Minister of Conservation (18 Oct. 2021), Attachment B.</p> <p>11. Were capacity-building activities undertaken during implementation and are they still provided? <i>Meetings to explain Sanctuary restrictions were held pre-implementation with marine mammal viewing operators and occur annually.</i></p> <p>12. Who makes decisions about the number and types of capacity-building activities – Sanctuary management, stakeholders, both? <i>The Bay of Islands District Office makes the decisions, dependant on capacity and budget.</i></p> <p>13. What types of information dissemination efforts were undertaken? <i>Regular dialogue with MM tour operators, radio advertising – see below.</i></p> |
| Local understanding of the sanctuary's rules and regulations | Education/signage re: speed limits and boundaries | <p>14. What signage or other materials explain the speed limits, boundaries, and distance limits at the Sanctuary? <i>Signage at boat ramps</i> <i>Buoys marking safe zone.</i> <i>DOC website provides information.</i> <i>Radio messages over summer.</i> <i>Boaty bags handed out on patrols/advocacy trips.</i> <i>Russel Radio (marine radio) messaging occurs over summer.</i> Sanctuary signage location 26/1/23 Buoys map location</p> <p><i>Links to documents relevant to the marking, promotion and patrolling of the Marine Mammal Sanctuary which has been established to protect the bottlenose dolphin population</i> DOC-7389024</p> <p><i>Advocacy</i> Kids brochure March 2022 Sanctuary Adult brochure</p> |

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| | | <u>Sanctuary user guidance Feb 2022</u> |
| Clearly defined enforcement procedures | Enforcement of speed limits and boundaries (specifically with respect to the enforcement programme and its structure – How does DOC enforce the rules?) | <p>15. Do formal enforcement guidelines and procedures exist? <i>Yes, warranted staff are required to follow DOC CLE Standard Operating Procedures and guidelines including DOC's National Compliance Strategy 2017-2020, Enforcement Policy and using DOC CLE Works.</i></p> <p>16. Do informal enforcement guidelines and procedures exist? <i>No.</i></p> <p>17. Who prepared these guidelines and procedures? <i>DOC National Compliance Team.</i></p> <p>18. Describe the guidelines and procedures. <i>Refer to DOC compliance SOPs in 15, above.</i></p> <p>19. Are they periodically reviewed and updated? <i>Yes, by the National Compliance Team.</i></p> <p>20. Are staff trained in the guidelines and procedures? <i>Yes, all potential Warranted Officers must complete Warranted Officer training with refreshers every three years.</i></p> <p>21. Is there coordination of the guidelines and procedures with other enforcement agencies (e.g., FNZ)? <i>National Compliance Team are responsible for co-ordinating guideline with other agencies. DOC Bay of Islands co-ordinates patrols with MPI-Fisheries and NZ Police for enforcement in busy period over summer in Bay of Islands.</i></p> <p>22. Are the enforcement guidelines and procedures appropriate to the task? <i>Yes.</i></p> <p>23. Has DOC used CLEWorks to record law enforcement incidents since 2021? <i>CLE Works has been used to record incidents, have evidence of reports from 21/22, 22/23 and 23/24 patrols.</i></p> <p>24. Number of successful prosecutions due to clearly defined enforcement procedures.</p> |

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| | | <p><i>No prosecutions attempted.</i></p> <p>25. Number of attempted prosecutions that failed due to technicalities due to failure in procedure.</p> <p><i>No prosecutions attempted.</i></p> <p>26. Accessibility and availability of enforcement guidelines.</p> <p>Accessible on DOC Intranet – see Intranet - How we do compliance at DOC</p> <p>Links</p> <p>Compliance at DOC - Intranet</p> <p>DOC Compliance and Enforcement Policy</p> <p>Enforcement system (CLE Works/Punaha Tutohu and managing information) SOP</p> <p>DOC Guideline - enforcement decision-making (CLE)</p> <p>DOC-7684387MM patrol report 11/12/23</p> <p>DOC-7690882 MM patrol statistics 8 Jan 2024</p> <p>BOI Sanctuary Compliance Plan 22/23</p> <p>Memo BOI Sanctuary Compliance work 21/22 and summer plan 22/23</p> <p>BOI Marine Compliance Plan 24/25</p> <p>Memo BOI Sanctuary Marine Patrols 22/23</p> <p>BOI Marine Compliance Plan 23/24</p> <p>docCM - Sanctuary My CLC report 21/22 (confidential - have limited access)</p> <p>Sanctuary My CLC report 22/23 and 23/24 (confidential - have limited access)</p> |
| Enforcement coverage | Level of effort to promote compliance with speed limits and boundaries | <p>27. How many hours per week are devoted to patrols?</p> <p><i>In summer – 40 hours for one FTE, including time on the water and admin follow up.</i></p> <p><i>In winter – 8 hours per week, including on the water time, admin follow up and AIS (marine tracking) follow up.</i></p> <p>BOI Marine Compliance Plan 24/25</p> <p>28. What is the number of patrols per week?</p> <p><i>In summer we plan on spending 4 -5 days on the water (Warranted Officer and Skipper) and one day doing admin and follow up (Warranted Officer) total approx. 80</i></p> |

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| | | <p><i>hrs but weather dependent. Prioritise weekends, long weekends and any organised events and cruise ship days.</i></p> <p><i>In winter 1-2 days a month as per Marine Compliance Plan.</i></p> <p>29. What is the patrol area?</p> <p><i>Bay of Islands Marine Mammal Sanctuary boundaries.</i></p> <p>30. How do patrols vary over time and area?</p> <p><i>Fewer patrols in winter as fewer vessels are present. If marine mammals are present, we will follow them within the Sanctuary boundaries to ensure compliance by boating public. If marine mammals are not present the Sanctuary safe zones are the main focus for compliance on patrols.</i></p> <p>31. Number and type of interactions per patrol?</p> <p><i>Variable from 0 – 50 interactions with 95% of them positive</i></p> <p>32. Number of unauthorised visitors caught and/or noticed?</p> <p><i>Caught = approached and spoken to around 170 vessels. Noticed = no data but this will be collected from Dec 2024 onward where possible.</i></p> |
| Level of Compliance | Level of compliance with speed limits and boundaries | <p>33. How has the number of offences changed over time?</p> <p><i>No change.</i></p> |
| Populations of key or taonga species | Current and new learning re: bottlenose dolphins esp. vessel interactions since 2021 | <p>34. How are marine mammal and vessel interactions monitored?</p> <p><i>Through patrols and National Office Marine Species Team science contract 2023/24. – Dave Lundquist.</i></p> <p>35. What is the number of vessel interactions per year/season?</p> <p><i>The total number of vessel interactions with marine mammals is unknown but likely to be significant.</i></p> <p>36. How has the number of vessel interactions changed since Sanctuary establishment?</p> <p><i>May be answered by research above and will need ongoing research to determine.</i></p> |
| Existence and application of scientific research and input | Current and new learning that has occurred at the Sanctuary since 2021 | <p>37. What scientific studies have occurred at the Sanctuary since 2021?</p> <p><i>21/22 Tri Oceans Marine Mammal Monitoring BOI contract 21/22</i></p> |

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| | | <p>2023/24 Far Out Research Group – Contract managed by Marine Species Team.</p> <p>Schedule of all BOI Marine Mammal Research Contract Documents from 2017 - 2023. DOC-6878581</p> <p>38. How have the data/results/conclusions from scientific research been applied at the Sanctuary?</p> <p><i>Neither of the studies above have resulted changes to the Sanctuary or management within it. The first study was only a few months after the Sanctuary was created and the report of the second study was only finalised in November 2024. Thus, this review is the first time the results will be considered with respect to potential changes to the Sanctuary.</i></p> |
| Level of Treaty partners, whānau, hapū, iwi in leadership positions | Level of Treaty partner engagement and whether DOC management has met Treaty partner aspirations | <p>39. What is the management structure for the Sanctuary?</p> <p><i>Research is managed by DOC's Marine Species Team.</i></p> <p><i>Delivery/Compliance by Ops Manager BOI District. Ranger Marine Biodiversity supervises the Sanctuary work programme supported by Senior Ranger Biodiversity also a Warranted Officer, contract skipper during summer and wider BOI Team.</i></p> <p>40. How have Te Pēwhairangi hapū participated in management of the Sanctuary?</p> <p><i>Signed Terms of Reference Agreed between Ngā Hapū o Te Pēwhairangi hapū and DOC 20 Nov 2020. DOC-6508008</i></p> <p><i>Nga Hapū participated in management and field trips in 2021/2022 year.</i></p> <p><i>Ongoing hui over management issues.</i></p> <p>Sanctuary hui 28/4/21</p> <p>Sanctuary hui 13/10/22</p> <p>Sanctuary hui 25/10/23</p> <p>Sanctuary meeting minutes Feb 2024</p> <p>Sanctuary hui minutes 2 April 2024</p> <p>Sanctuary hui minutes July 24</p> <p>41. How do Te Pēwhairangi hapū currently participate in management of the Sanctuary?</p> |

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| | | <p>2024/25 year: hui on 17 July 2024, Ngā Hapū were informed of desktop review of Sanctuary and they expressed interest in the opportunity to be involved in that review including consideration of the original TOR.</p> |
| Level of rangatira (leadership) and kaitiaki (guardianship) participation in operational activities (e.g., monitoring, training) | Level of Treaty partner engagement in operational activities and whether level meets Treaty partner aspirations | <p>42. How many Rōpū members are involved in monitoring/training activities? <i>Rōpū members offered opportunities to join the compliance/advocacy patrols on multiple occasions. Some initial Rōpū attendance on patrols but limited by availability issues and bad weather.</i></p> <p>43. In what capacity are Rōpū members involved in monitoring/training activities? <i>As above.</i> <i>To date no formal training has been undertaken. Issues, e.g., finding suitable kaimahi candidates, availability, training costs and supervision of Honorary Warranted Officers have not been worked through.</i></p> <p>44. How many Rōpū members are involved in leadership positions associated with monitoring/training activities? <i>None at this stage.</i></p> |