



**NSW National Parks and Wildlife Service**

# **Annual Monitoring Report 2023**

**Quarantine Station – Sydney Harbour NP  
Integrated Monitoring Program**



## Acknowledgement of Country

Department of Climate Change, Energy, the Environment and Water acknowledges the Traditional Custodians of the lands where we work and live.

We pay our respects to Elders past, present and emerging.

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# 1. Introduction

## Overview of the Site

The Quarantine Station (QS) (Figure 1) is located at North Head, Manly within the Sydney Harbour National Park (SHNP). The approximately 27 hectare site has cultural, environmental, and historical significance as a former quarantine station from 1828 to 1984.

QS is owned by the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) and managed by the NSW National Parks and Wildlife Service (NPWS). DCCEEW is the parent organisation of NPWS and regulates matters relating to heritage, pollution, native vegetation, biodiversity, and national parks.

Planning approval was granted in 2003 for the 'North Head Quarantine Station Conservation and Adaptive re-use Proposal' with NPWS and Mawland Quarantine Station Pty Limited (Mawland) as co-proponents.

In 2006 the site was leased to Mawland for the upgrade of the buildings and facilities on the site and the operation of a tourist facility "Q Station" providing accommodation, conferences, weddings, events, a restaurant and café and education tours. On 11 May 2022, the lease was transferred to North Head Sydney Pty Limited (NHS), which now conducts the day-to-day activities of the site in accordance with the conditions of planning approval and the lease.

QS is home to endangered plants and animal populations, aboriginal sites and historic heritage values of state and national significance. Protecting populations of endangered plants and animal populations is key to upholding their viability and genetic diversity in the Sydney Harbour National Park and more widely across the State.

A wide range of ongoing population monitoring, management and conservation activities are undertaken at QS and across SHNP. NPWS collaborates with other landholders, volunteers, lessees, other groups and agencies to ensure native species and cultural heritage are properly conserved.

## Purpose of the 2023 NPWS Annual Monitoring Report

This report has been prepared to meet the Minister's Conditions of Planning Approval (CoPA) 219 for the site under approval MP08\_0041 and subsequent modification (MP08\_0041 MOD 3).

219. As part of the annual environmental report (condition 221) and comprehensive audit (condition 226), the co-proponents shall produce a monitoring report outlining results from the integrated monitoring program. The report shall:

- a) include an analysis of monitoring results and trends collected over time; and
- b) identify measures taken or proposed to be undertaken to respond to any adverse or unexpected impacts identified.

This report aligns with specific monitoring indicators that NPWS is responsible for as part the 2006 Integrated Monitoring and Adaptive Management System (IMAMS).

The report includes an analysis of monitoring outcomes and trends, as well as measures taken or proposed to be undertaken to respond to any adverse or unexpected impacts identified in 2023. It is to be read in conjunction with Appendix C: NHS 2023 Annual Monitoring Review, which covers other specific indicators from the IMAMS and incorporates the specific indicators from this report into headline indicators.

To the best of our knowledge, the information provided for collation in this report has been provided in good faith and is true and correct.

## **Integrated Monitoring Program and Adaptative Management System (IMAMS)**

The IMAMS was developed in 2006 by the former QS lessee and site operator, Mawland, as required by CoPA 215, to monitor site activities and implement management measures to conserve the values of the site. It is the responsibility of both the Quarantine Station lessee/site operator and NPWS to monitor certain features identified in this system.

The 2006 IMAMS includes 150 specific indicators each with a pre-set benchmark, acceptable range (desirable performance), monitoring method and potential responses should the result be outside the acceptable range. The 150 specific indicators have been clustered into headline indicators representing environmental, cultural, social and economic sustainability conditions.

The specific indicators NPWS are responsible for monitoring are:

- Fox and cat abundance
- Rabbit abundance
- Black rat abundance
- Long-nosed bandicoot abundance
- Long-nosed bandicoot deaths attributable to vehicles
- Little penguin breeding burrows
- Sunshine Wattle abundance
- Camfield's Stringybark abundance
- Fuel load in bushland areas
- Lease breach notifications
- QSCCC meeting attendance
- Condition of midden in Wharf Precinct.

The 2006 IMAMS program anticipated that some indicators would be altered or replaced as their performance is reviewed (IMAMS 2006, page 9). A draft 2003 IMAMS has been developed by the co-proponents and is currently under review.

This monitoring has been undertaken consistent with the 2006 IMAMS unless indicated below:

- The indicator 'Bandicoot activity and use of foraging habitat' has been replaced by 'Long-nosed Bandicoot abundance and viability', consistent with method outlined in the draft 2023 IMAMs, reflecting current NPWS monitoring methods and best practice.
- Fauna deaths attributable to vehicles are no longer monitored in accordance with the 2006 IMAMS. Review of long-term monitoring data determined there had been a negligible or low impact to fauna from vehicles within Quarantine Station, and that not on-going monitoring was not warranted.
- Surface fine fuel loads were provided in accordance with the 2006 IMAMS, however NPWS now monitors Overall Equivalent Fuel Hazard reflecting current best practice.

These indicators have been monitored consistent with the draft 2003 IMAMS.

## 1.1 Summary of monitoring results

A summary of performance, trends and management response in the 2023 NPWS Annual Monitoring Report is provided in Table 1.

The key to the performance results used in Table 1 is as follows:



**Within acceptable range:** the indicator results lie within the defined benchmark.









**Not within acceptable range:** the indicator results have not met the defined benchmark.







Consistent with the indexing system of the 2006 IMAMS, a 0-1 index has also been provided for specific indicators. These have been aggregated into a score for the headline indicators in Appendix C where feasible.

NPWS believes headline indicator scores provide only a limited measure of performance as the contribution of specific indexes is not weighted according to relative importance.









In Table 1, reference was made to the NPWS Quarantine Station Monitoring Report 2017-2021 to assist identify 5 year trends in performance.





**Table 1: Summary of Quarantine Station environmental performance 2023 – NPWS specific indicators**

Annual report requirement	Section in this report	Environmental performance	Management measures	Within acceptable range	5 year trend	Index (0-1)
<b>Predator and Pests</b>	2					
Fox and cat abundance	2.1	A single fox and no cats were detected in 2023. This was within the acceptable range (less than 3 cats and 1 fox per annum) during the reporting period. NPWS responded to all detections and implemented on-going predator management programs.	NPWS enacted the Little Penguin Protection Plan (draft) measures, including increased monitoring, soft jaw trapping, shooting operations and 1080 baiting.	 Within acceptable range	 Steady	1
Rabbit abundance	2.2	Rabbit numbers were above the acceptable range of 24 in the lease area, with an average of approximately 29 rabbits detected per monitoring event.  The number of rabbits at QS is comparable to the abundance rate for other open spaces across North Head. Following the end of a temporary state-wide suspension of NPWS shooting operations in 2022, NPWS has increased rabbit control at QS and across North Head.	In 2023 NPWS conducted 8 shooting operations targeting rabbits at QS , an increase from previous years, resulting in 123 rabbits shot. Further upscaling of shooting operations will be considered if required. NPWS will also work with LLS and other land managers to release new strains of biological control when they become available.	 Not within acceptable range	 Negative	0
Black rat abundance	2.3	Black rat captures were reported within the acceptable range (equal to or less than 16%) of total headland captures across North Head.	Continued monitoring of black rat abundance and control measures within buildings was undertaken.	 Within acceptable range	 Steady	1
Long-nosed Bandicoot population health	3					

Annual report requirement	Section in this report	Environmental performance	Management measures	Within acceptable range	5 year trend	Index (0-1)
Long-nosed bandicoot deaths attributable to vehicles in the lease area	3.1	In 2023 there was one long-nosed bandicoot death attributed to vehicles in the lease area, within the acceptable range for Trigger 2 (less than 2 adult deaths for any 6-month period). Triggers 3 to 5 relating to this monitoring feature were not triggered during the reporting period.	Current preventative measures to protect bandicoots from vehicle strike are deemed sufficient i.e. staff/contractor induction training, speed limits and limited vehicle access.	 Within acceptable range	 Steady	1
Long-nosed bandicoot abundance and viability	3.2	The 2020 population viability analysis and data from 2021 - 2023 suggest long-nosed bandicoots will maintain a greater than 60% persistence rate for the next 50 years.	NPWS will undertake ongoing monitoring and has engaged a consultant to undertake an interim PVA and an assessment of foraging habitat for early 2024. Additional investment in bandicoot habitat restoration (weed control) is also planned for early 2024. Predator control is ongoing across North Head, involving soft jaw trapping, shooting operations and 1080 baiting.	 Within acceptable range (predicted)	 Steady	1
<b>Little Penguin population health</b>	4					
Little penguins breeding burrows active over 2 breeding seasons between Cannae Point and the southern end of Store Beach	4.1	A summary of results from the 2022/23 breeding season showed an increase in breeding burrows on the point between Quarantine Station and Store Beach with 10 breeding burrows recorded, up from 3 from the previous breeding season. Little Penguin burrows were within the acceptable range for trigger 1 (decrease within 5%). The total number of eggs laid and chicks fledged approximately doubled compared to the previous year at this location, however for the Manly penguin population overall, the number of eggs laid and chicks fledged was similar to the 2021/2022 breeding period. Overall, the Manly	Ongoing monitoring undertaken for numbers of breeding burrows, active breeding pairs, eggs laid, and chicks fledged. Additional investment in ABOV signage and habitat restoration (weed control) at Quarantine Beach is planned for early 2024. Predator monitoring and control was ongoing in accordance with the Little Penguin Protection Plan (draft) measures, including increased monitoring, soft	 Within acceptable range	 steady	1



Annual report requirement	Section in this report	Environmental performance	Management measures	Within acceptable range	5 year trend	Index (0-1)
		little penguin population remains low, and has not recovered after significant fox predation in 2015. No breeding burrows were again recorded at Quarantine Beach. There has been no breeding at this site since 2018.	jaw trapping, shooting operations and 1080 baiting.			
<b>Native vegetation health</b>						
	5					
Sunshine Wattle abundance	5.1	Sunshine Wattle were recorded within the acceptable range (greater than 12) in 2023. A total of 149 plants were recorded, resulting from the recent supplementary planting program and natural recruitment.	Ongoing monitoring and further supplementary planting was undertaken in 2023. There is weed control targeting sunshine wattle planned for early 2024.	 Within acceptable range	 Positive	1
Camfield's Stringybark abundance	5.2	Camfield's Stringybark numbers were recorded above the acceptable range (3 and above) in the 2019-2022 period.	Ongoing monitoring.	 Within acceptable range	 Steady	1
Fuel load in bushland areas	5.3	Surface fine fuel loads in bushland areas on the edge of the QS lease area were on average within the acceptable range of less than 15 tonnes per hectare for 2023. Overall fuel loads were very high at 2 locations.	Ongoing monitoring and planned asset protection zones upgrades.	 Within acceptable range	 Steady	1
<b>DEC Quarantine Station partnership</b>						
	6					
Lease breach notifications	6.1	There were no formal lease breaches reported, which is within the acceptable range of 0-3 notifications per year.	No management actions required. A review of lease conditions will occur prior to expiration of the approval in December 2024.	 Within acceptable range	 Steady	1

Annual report requirement	Section in this report	Environmental performance	Management measures	Within acceptable range	5 year trend	Index (0-1)
<b>Partnerships</b>						
	7					
QSCCC meetings	7.1	Quarantine Station Community Consultative Committee meetings were above the acceptable range of 70-85% member attendance during the reporting period, with an average of 97% attendance.	No management actions required	 Within acceptable range	 Steady	1
<b>Aboriginal sites condition</b>						
	8					
Condition of midden in Wharf Precinct	8.2	NPWS monitored the midden in the wharf precinct in 2023 and the site remains protected and undisturbed by QS visitors, guests and site operations.	Ongoing monitoring	 Within acceptable range	 Steady	1



## 2. Predator and Pests

Pests and weeds have a significant impact on the ecosystems within Sydney Harbour National Park including Quarantine Station. NPWS conducts risk assessments for new and emerging weeds and pests and undertakes fox and rabbit control and weed control to protect biodiversity in the park. NPWS has specific regional pest management strategies for the control of pest animals within the NSW National Parks estate.

### 2.1 Foxes and Cats

#### 2.1.1 Monitoring results and trends:

A single fox and no cats were detected in May 2023. This remains within the acceptable range of 3 cats and 1 fox per annum.

Foxes and cat numbers have remained steady during the last 5 years and within the acceptable range. However even small number of foxes and cats can potentially have a significant impact, particularly on the penguin population.

#### 2.1.2 Performance and management measures:

In response to this year's fox detection, NPWS enacted the Little Penguin Protection Plan (draft) measures and did intensive monitoring, soft jaw trapping, shooting operations and 1080 baiting. The NPWS non-native predator monitoring and management program proved effective in 2023 and NPWS promptly responded to all detections of predators.

NPWS are alerted to detections via camera monitoring programs and from public and staff sightings and/or evidence of fox prints and scats. In response to detections, NPWS implements the Little Penguin Protection Plan (draft) and intensive monitoring until the predator is controlled. NPWS first response includes increasing fauna camera monitoring and raking of beaches for prints and scats to locate the predator. Penguin Warden Volunteers assist conduct checks for any signs of predation at sunrise and sunset at beaches located in the Area of Outstanding Biodiversity Value (AOBV – formally critical habitat), including Quarantine Beach.

During 2023 NPWS also implemented ongoing cyclic non-native predator management programs at North Head using 1080 baiting.

### 2.2 Rabbits

#### 2.2.1 Monitoring results and trends:

In 2023 rabbit numbers were above the acceptable range of within 10% of the 2006 benchmark (24 rabbits in lease area at 20/09/06), with an average of approximately 29 rabbits detected per monitoring event (231 rabbits detected over 8 evenings).

Rabbit numbers have been above the acceptable levels for at least the last 5 years, though the increase is comparable to other open spaces across North Head. NPWS does not believe the 2006 benchmark for rabbits is realistic or appropriate and proposes to set a new benchmark in the draft 2023 IMAMS.

## **2.2.2 Performance and management measures:**

In 2023 NPWS conducted 8 shooting operations targeting rabbits at QS , an increase from previous years, resulting in 123 rabbits shot over the year.

Factors affecting current rabbit abundance may include increased resistance to Rabbit Haemorrhagic Disease Virus (RDHV), the temporary NPWS state-wide suspension of shooting operations in 2022 and improved breeding conditions.

RHDV or calicivirus is considered an endemic disease and will usually appear naturally when environmental conditions and vectors are favourable. LLS coordinates the release of new strains of RDVH following sampling when conditions are suitable.

NPWS will further upscale shooting operations as required and will continue to work with LLS to release biological controls as they become available. NPWS is satisfied with current adaptive management programs, which incorporates a whole of headland approach to control rabbits across NPWS reserves and Sydney Harbour Federation Trust lands.

## **2.3 Black rats**

### **2.3.1 Monitoring results and trends:**

Black rat captures were reported within the acceptable range being equal to or less than 16% of total headland captures across North Head. Only one rat was captured in the lease area (at the main carpark), which is approximately 2.4% of the total captured across the whole headland (43 rats).

### **2.3.2 Performance and management measures:**

While results were similar to the previous year, there has been a downward trend in black rat numbers across North Head and Quarantine Station over the last 5 years. Black rat abundance has likely been impacted by the increasing population of bush rats on North Head, and the ongoing control measures within buildings at QS.

Black rats are monitored by NPWS as a bi-catch of the Long-nose bandicoot monitoring program. The lessee is responsible for managing black rats within buildings to maintain good hygiene in accordance with the site's Predator and Pest Control Management Plan. Black rats are not currently controlled outside of buildings and no further management actions are required.



## 3. Long-nosed bandicoot population health<sup>1</sup>

### 3.1 Long-nosed bandicoot deaths attributable to vehicles in the lease area

#### 3.1.1 Monitoring results and trends

There was one long nosed bandicoot (*Perameles nasuta*) death attributable to vehicles found within the QS lease area in 2023. This was within the acceptable range for Trigger 2 (less than 2 adult deaths for any 6-month period).

The number of bandicoot deaths attributable to vehicles within the lease area has remained steady over the last 5 years.

#### 3.1.2 Performance and management measures

Triggers 3 to 5 were not triggered during the 2023 reporting period and adaptive monitoring measures were not needed. NPWS is satisfied with current preventative measures to protect bandicoots from vehicle strike, which include staff/contractor induction training, speed limits and limited vehicle access in the lease area.

During 2023 there were 11 roadkill deaths along North Head Scenic Drive outside the lease area. The number roadkill fatalities across North Head has likely been affected by the intensification of use of neighbouring Harbour Trust land and the upgrade of NPWS visitor facilities at North Head. However, the increased traffic around North Head, outside of QS, does not seem to be affecting bandicoot population health (refer below).

### 3.2 Long-nosed bandicoot abundance and viability

#### 3.2.1 Monitoring Results and Trends

The annual monitoring program was undertaken in May 2023 across North Head. There were 363 total captures and 114 new individuals captured across all transects at North Head. By way of comparison In 2022, there were 257 total captures and 80 new individuals captured across North Head. In 2023, there were 73 captures in transects in and adjacent to Quarantine Station, which is a similar rate to the last 3 years.

The 2020 population viability analysis (PVA) estimated a stable population of approx. 200 individuals in North Head. It found that under current conditions, the North Head Long-nosed Bandicoot population has a 64% chance of persisting after 50 years.

The next Population Viability Analysis (PVA) to determine the persistence rate of bandicoots is due in 2026 (CoPA), however NPWS has organised an interim PVA in early 2024 to cover

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<sup>1</sup> Monitoring undertaken consistent with amended monitoring methodology outlined in Draft 2023 IMAMS

2021 – 2023. It is intended to include the results in the 2024 annual monitoring report. The 2020 PVA and data records from 2021-2023 suggest a persistence rate of above 60% will be maintained.

### **3.2.2 Performance and management measures**

NPWS monitors the population across the headland and within Quarantine Station with other stakeholders. This includes monitoring bandicoot numbers, genetics and body condition. Monitoring assists NPWS assess breeding success and population response to threats such as habitat loss, predation by dogs and foxes, inbreeding and disease. Long-nosed bandicoot monitoring and management forms part of the work program of the North Head Long-nosed Bandicoot Recovery Team.

NPWS undertook predator control in 2023 using 1080 baiting, soft jaw trapping and opportunistic shooting targeting foxes across North Head, In 2023, additional adaptive management responses were not needed and no habitat reconstruction or rehabilitation works were deemed necessary.

Weed control to improve the condition of bandicoot shelter habitat, associated with shrubs and dense bushy areas adjacent to foraging areas, is planned for early 2024.

In addition to an interim PVA, NPWS has engaged a consultant to undertake a new assessment of bandicoot foraging habitat at QS, and propose habitat enhancement works if needed. Future habitat enhancement works will be considered if site activation plans by the lessee have the potential to impact on habitat quality and population health.



Image: Long-nosed bandicoot at Quarantine Station (Credit: Stephanie Martin/NPWS)

## 4. Little Penguin Population Health

### 4.1 Little Penguin breeding burrows that are active during two seasons between Cannae Point and the southern end of Store Beach

#### 4.1.1 Monitoring results and trends:

The monitoring area for little penguins (*Eudyptula minor*) under this indicator extends outside the QS lease boundary until the southern end of Store Beach.

In 2022/23 there was an increase in active burrows between Cannae Point and the southern end of Store Beach with 10 breeding burrows identified on the point between Quarantine Station and Store Beach to the south, up from 3 from the previous breeding season (a 233% increase). This is within the acceptable range for trigger 1 (decrease within 5%) and above the 2006 benchmark (7 burrows). This is a positive result for this particular location following a period of decline in breeding activity. There resulted an approximate doubling of eggs laid and fledglings hatched at this location from the previous breeding season.

However, the total number of eggs laid and chicks fledged across the whole Manly penguin population remained around the same as the 2021/2022 breeding season, due to the main breeding season starting later than normal resulting in insufficient time for pairs to lay second clutches.

Monitoring results for the Manly population overall remain low and indicate the Manly Little Penguin breeding population has not yet been able to recover from the extensive losses to the breeding population from fox predation in 2015.

#### 4.1.2 Performance and management measures:

There was again no breeding activity detected in the vicinity of Quarantine Beach, which had historically been a significant and consistent breeding area. Activities around the Boilerhouse, Wharf Precinct and Quarantine Beach will be monitored for potential impacts on the re-establishment of penguin breeding near Quarantine Beach.

NPWS continues to monitor and manage the penguin populations as part of the NSW Government Saving our Species program. NPWS has been implementing the Little Penguin Protection Plan (draft) involving predator monitoring and control (using 1080 baiting, soft jaw traps and shooting operations).

NPWS is also working with NSW Maritime to upgrade signage and marker buoys restricting activities around the Area of Outstanding Biodiversity Value.

Weed control to improve habitat condition is planned for 2024 near the Boilerhouse at Quarantine beach, which was the site of penguin nesting up until 2018, and at Store Beach.

## 5. Native vegetation health

### 5.1 Sunshine Wattle abundance in lease area

#### 5.1.1 Monitoring results and trends:

Sunshine Wattle (*Acacia terminalis*) abundance including seedlings were recorded within the acceptable range (greater than 12) in 2023.

Recent plantings of seedlings in bush remnants across the site have increased total abundance of the species in the lease area. A total of 149 plants was recorded in 2023 including 41 mature plants, 94 juveniles and 14 seedlings. This result is a significant increase from the 12 records in 2018.

#### 5.1.2 Performance and management measures:

In 2021, Asset Protection Zone (APZ) maintenance by the lessee impacted on several sunshine wattle plants. As part of the subsequent investigation and treatment, NPWS worked with the Saving Our Species program to remediate the area and plant approximately 100 new seedlings through a community planting initiative incorporating a Back to Country event. In 2023, further supplementary planting was undertaken to infill areas previously planted out.

NPWS will continue monitoring sunshine wattle abundance and are planning additional weed control targeting *Acacia terminalis* in 2024.

The new QS lessee (from 2022) is actively working to protect Sunshine Wattle and have participated in flagging all plants to assist with ongoing site management.

### 5.2 Camfield's Stringybark

#### 5.2.1 Monitoring outcomes and trends:

Four Camfield's Stringybark (*Eucalyptus camfieldii*) plants were recorded in the QS lease area in 2023, one more than in previous years. The number of Camfield's Stringybark within the leased area remains within the acceptable range (3 and above) in 2023.

#### 5.2.2 Performance and management measures:

The original 3 Camfield's Stringybark plants found within the lease area are alive and there is no indication QS operations have impacted or disturbed these plants. An additional specimen was located this year just within the lease area, however it was in poor condition with eaten discoloured leaves. This is unlikely to result from QS operations as it lies some distance from QS operations and above the QS catchment.



## 5.3 Fuel hazard in bushland areas on edge of the Lease Area

### 5.3.1 Monitoring results and trends:

The 2006 IMAMS indicator is limited to surface fine fuel hazard. Surface fine fuel loads in bushland areas on the edge of the Quarantine Station lease area were on average within the acceptable range of less than 15 tonnes per hectare for 2023, similar to levels recorded over the previous 5 years.

### 5.3.2 Performance and management measures:

The monitoring has shown that surface fine fuel loads have been maintained within acceptable levels during the reporting year.

NPWS currently monitors overall fuel hazard (OFH) which considers the whole fuel complex including bark hazard, elevated fuel hazard and surface fine fuel hazard. Two sites recorded a very high overall fuel hazard: east of P33 (3<sup>rd</sup> class precinct) and south of isolation precinct. This is outside of the acceptable range in the draft 2023 IMAMS (low to high OFH). Significant portions of North Head were burnt in 2020, and the elevated fuel hazard at these sites may be limited to those locations.

NPWS is currently undertaking planning to upgrade Asset Protection Zones (APZs) for Quarantine Station to be implemented in 2024, comprising widening existing APZs, establishing new APZs and prescribing ongoing maintenance requirements.

NPWS has in place is strategic programs for fire planning, hazard reduction, and highly trained rapid response firefighting crews and community alerts. Additional fuel reduction management measures around Quarantine Station such as mechanical fuel removal or burning outside of APZs will be considered as part of ongoing NPWS fire planning.

## 6. DEC Quarantine Station partnership

### 6.1 Lease Breach Notifications

#### 6.1.1 Monitoring results and trends:

There were no formal lease breaches in 2023 which is within the acceptable range of 0-3 notifications per year. This is similar to the previous 5 years,

#### 6.1.2 Performance and management measures:

The lease will be reviewed in 2024 as part of the planning for a new planning approval in 2025, required due to the expiration of the current planning approval at the end of 2024.



## **7. Partnerships**

### **7.1 Quarantine Station Community Consultative Committee meetings**

#### **7.1.1 Monitoring results and trends:**

Quarantine Station Community Consultative Committee (QSCC) meetings attendance averaged 97% over 2023, above the acceptable range of 70-85%. Attendance levels at QSCCC meetings remain at a high level.

#### **7.1.2 Performance and management measures:**

The QSCC remains highly engaged and attendance levels have been high since 2018.

## **8. Aboriginal sites condition**

### **8.1 Condition of midden in Wharf Precinct**

#### **8.1.1 Monitoring results and trends:**

The condition of the midden at the Wharf precinct was monitored for grass cover and signs of erosion. Vegetation cover remains satisfactory and there were no signs of erosion in 2023. This result has remained similar since 2018.

#### **8.1.2 Performance and management measures:**

NPWS is satisfied that the Aboriginal site within the wharf precinct is protected from and undisturbed by visitors and guests associated with QS operations and recreational activities. Continued growth of vegetation around the site will be monitored for potential impacts.

Some of the sites within the lease area outside the wharf precinct have proven difficult or impossible to access, or the site itself has become unrecognisable due to erosive and natural degradation.

The Quarantine Station Aboriginal Heritage Management Plan was revised as part of the NHQS Site Wide Plans project in 2023 and was submitted for approval to NSW Heritage.