

Review of Environmental Factors: Ongoing Operation of North Head Quarantine Station, Manly



Prepared by Keylan Consulting on behalf of North Head Sydney
Pty Ltd

Submitted to National Parks and Wildlife Services NSW

Declarations

As the person responsible for the preparation of the Review of Environmental Factors (REF), I certify that, to the best of my knowledge, this REF is in accordance with the *Environmental Planning and Assessment Act 1979* (EP&A Act), the *Environmental Planning and Assessment Regulations 2021* (EP&A Regulation) and the Guidelines approved under section 170 of the EP&A Regulations, and the information it contains is neither false nor misleading.

Signature

Dan Keary

Name (printed)

Dan Keary

Position

Director, Keylan Consulting Pty Ltd

Date

15 July 2024

By endorsing the REF, the determining authority confirms that the information in the REF is accurate and adequate to ensure that all potential impacts of the activity can be identified.

Signature

Name (printed)

Position

Date

Seal (if signing under seal):

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Supporting documentation

Document title	Author
1. Flora and Fauna Assessment (FFA)	Ecologique
2. Species Impact Statement (SIS)	Ecologique
3. Site Travel and Access Plan (STAP)	Stantec
4. Heritage Impact Assessment (HIA)	Architectural Projects
5. Noise Impact Assessment	AKA Acoustics
6. Aboriginal Heritage Due Diligence Assessment	AMBS
7. ESD Statement	Credwell Energy
8. Bushfire Report	Peterson Bushfire
9. Copy of Consultation / Engagement	N/A

1 Introduction

This Review of Environmental Factors (REF) has been prepared by Keylan Consulting on behalf of North Head Sydney Pty Ltd (NHS) to support the ongoing operation of the Quarantine Station at North Head, Manly (the site) for cultural tourism purposes, including restaurant, tourist accommodation, visitor centre & museum, guided tours, environmental and cultural study centre and functions and events.

The operation of the site is undertaken in accordance with the current planning approval, which was granted by the NSW Minister for the Environment on the 23 December 2003. However, this planning approval is due to lapse on 23 December 2024. The operation of the site is also subject to a lease for cultural tourism, accommodation, conferences, and function purposes until 2027, with two options to extend until 2050.

On this basis, NHS seeks:

- to obtain a planning approval under Part 5 of the EP&A Act and Clause 171 of the EP&A Regulation for the ongoing operation of the Quarantine Station beyond 2024, consistent with the current lease (until 2050)
- rationalise the requirements of the planning approval in order to provide a flexible, contemporary approval for both NHS and National Parks and Wildlife Service (NPWS)

There is no proposed change of use from the current approved Key Site Activities as outlined in the current conditions of approval nor are there any new physical works proposed under this REF, beyond any works/activities associated with ongoing site operations.

The proposed activity carried out by, or on behalf of a public authority, are permitted without consent in accordance with the following:

- The site is zoned C1 National Parks and Nature Reserves under the *Manly Local Environmental Plan 2013* (MLEP 2013). Within this zone, uses authorised under the *National Parks and Wildlife Act 1974* (NPW Act) are permitted without consent.
- Section 2.73(1)(a) of *State Environmental Planning Policy (Transport and Infrastructure SEPP) 2021* (Transport and Infrastructure SEPP) states that development for any purpose may be carried out without consent on land reserved under NPW Act if the development is for a use authorised under that Act.
- The site is subject to a lease under section 151 of the NPW Act and its use for cultural tourism purposes is therefore authorised under that Act.

Therefore, the proposal is an activity in accordance with clause 5.1 of the EP&A Act because it involves the *carrying out of work* as defined under Section 1.4 of the EP&A Act and therefore requires an environmental assessment.

NPWS, as the determining authority, is required to consider the environmental impacts of the proposal in the context of Part 5 of the EP&A Act and Clause 171 of the EP&A Regulation. Accordingly, this REF is submitted to NPWS for consideration.

If this REF approval is granted, a range of new works will be required over the course of the lease period to ensure facilities are maintained at an appropriately high standard, and that the site's unique qualities and significance are protected and to enhance the operations/facilities provided by NHS. These works will be subject to separate planning approvals.

1.1 Purpose of Report

The purpose of the REF is to describe the proposal, to document the likely impacts of the proposal on the environment and to detail protective measures to be implemented to mitigate impacts.

The REF helps to fulfil the requirements of section 5.5 of the EP&A Act, which requires that NPWS examine, and take into account to the fullest extent possible, all matters affecting, or likely to affect, the environment by reason of the proposed activity.

1.2 Project Overview

The below table provides a high level of the proposed activity:

Proposal name	Ongoing operation of the North Head Quarantine Station for cultural tourism purposes.
Brief description	To secure approval for the operation of the Quarantine Station beyond December 2024 and to rationalise the requirements under the current planning approval, in order to provide a flexible, contemporary approval for both NHS and NPWS.
Location of activity	North Head Quarantine Station (Quarantine Station) is located at 1 North Head Scenic Drive, Manly, as shown in Figure 1. The site is part of the Sydney Harbour National Park. The site has an area of approximately 27.5 hectares (ha).
Name of NPWS park or reserve	Sydney Harbour National Park.
Description of any unreserved land	No acquisition is proposed.
Council	Northern Beaches Council.
NSW State electorate	Manly.
Estimate capital cost of project*	Nil.
Estimated duration of project	24 December 2024 to 27 October 2050.
Proposed commencement date	From 24 December 2024.
Proposed completion date	Proposal seeks to continue current operations on the site beyond 24 December 2024.

Importantly, we note the following in relation to the proposed REF pathway:

- There is no proposed change the current use of the site for approved purposes, nor will there be any reduction in the level of public access to and use of the site or site capacity.
- The REF will be subject to a public exhibition and submissions process, which will ensure that community members and other stakeholders have an opportunity to review and comment on the proposal.
- The REF pathway provides an opportunity for a more workable and contemporary planning approval that reflects both environmental standards and operational requirements.
- Such an approval, in combination with the requirements of the site's lease, will provide relevant environmental and other safeguards for the ongoing use of the site for approved purposes.

A detailed description of the proposed activity is provided at Section 4 of this report.

2 Ownership and Proponent

The site is owned by the NPWS, as described in the table below, NHS are the current lease holders and therefore are the proponent of this REF.

Contact name	Glenn Piper
Position	Director
Street address	1 North Head Scenic Drive, Manly
Postal address	PO Box 1297, Manly, 1655
Contact numbers	██████████
Email	████████████████████
Organisation	North Head Sydney Pty Ltd as Trustee for North Head Sydney Trust (NHS)
ACN/ABN	96795081040

3 Subject Site and Existing Environment

3.1 Overview of the project area

The Quarantine Station is located within the Northern Beaches Council Local Government Area (LGA) at North Head, Manly. The site is formally described as Lot 100, DP 1075571. This REF relates to the site in its entirety, as shown in Figure 1.

The site is located on the western side of North Head and covers 27.5 hectares (ha). The site is situated within the Sydney Harbour National Park.

The site operated as a quarantine station from 14 August 1832 to 29 February 1984. The site now operates largely for tourist use and includes a hotel, conference centre and restaurant complex known as 'Q Station'.



Figure 1: Subject Site (Source: Six Maps)

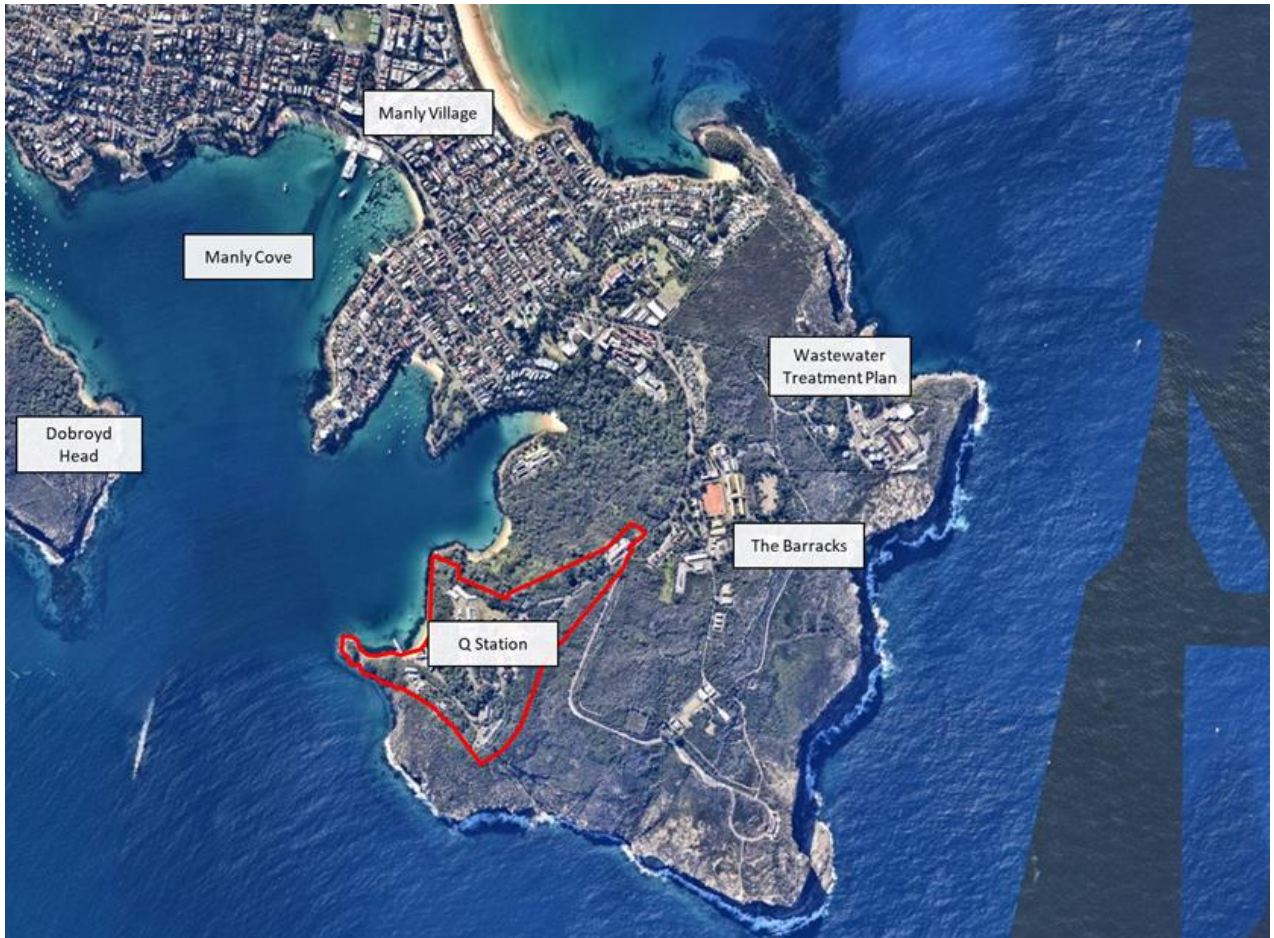


Figure 2: Site Context (Source: Near Map)

3.2 Existing Site Operations

On 11 May 2022, the lease of the Quarantine Station was transferred, with the consent of National Parks and Wildlife Service, by Mawland Quarantine Station Pty Ltd to North Head Sydney Pty Ltd as trustee for the North Head Sydney Trust. The current lease, which terminates on 25 October 2027, contains two options to extend the term of the lease for 15 years and a further 8 years and 35 days.

The current planning approval, which expires on 23 December 2024, permits the site to be used for a range of 'Key Site Activities' including *"restaurant, tourist accommodation, visitor centre & museum, guided tours, environmental and cultural study centre and functions and events."*

An overview of the existing site map and building references are shown below:

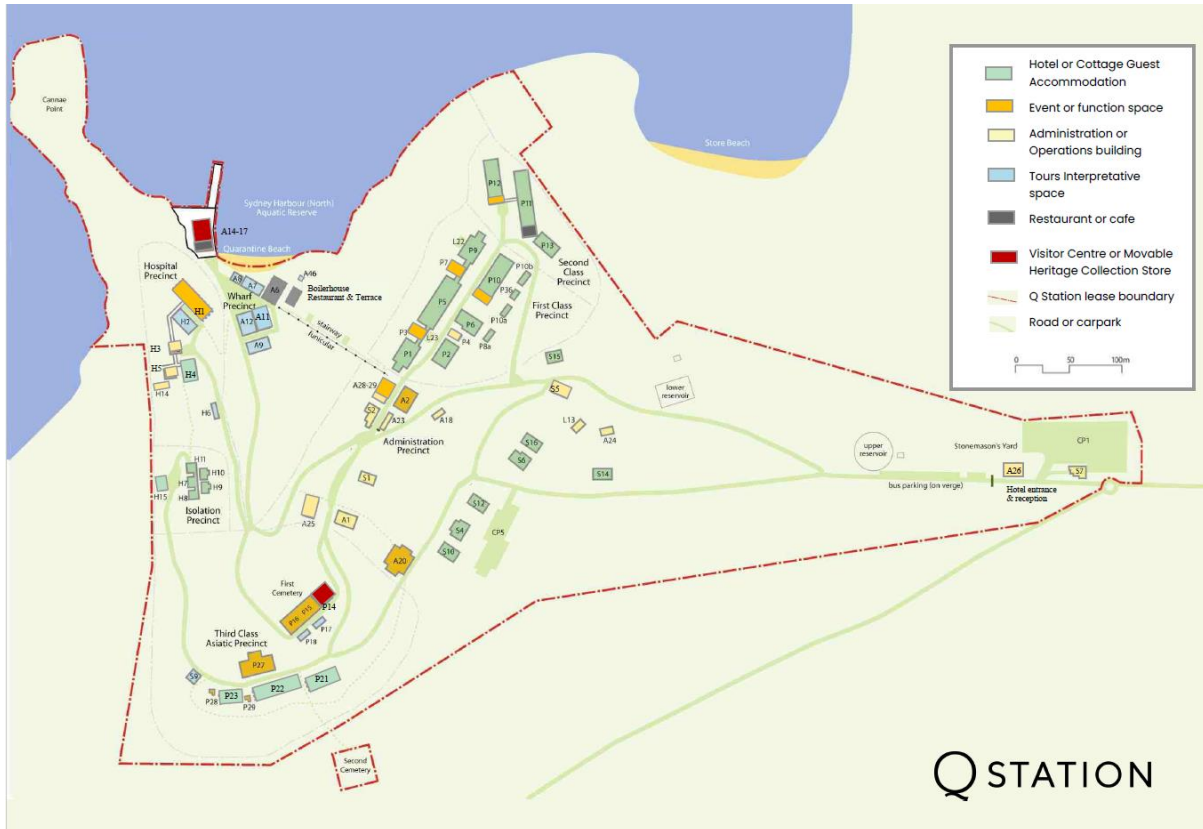


Figure 3: Site map (Source: NHS)

The use and day-to-day operations of the site are also governed by the following Site Wide Plans (SWPs):

- Aboriginal Heritage Management Plan (condition 70);
- Moveable Heritage and Resources Plan (condition 85);
- Heritage Landscape Master Plan (condition 91);
- Inscriptions Management Plan (condition 95);
- Internal Fitout Plan (condition 99);
- Interpretation Plan (condition 100);
- Infrastructure Control Plan (condition 105);
- AC sampling strategy (condition 111);
- Outdoor Visitor Infrastructure Plan (condition 112);
- Security Plan (condition 116);
- Access Strategy (condition 118);
- Site Travel and Access Plan (condition 120A)
- Predator and Pest Control Plan (condition 188);
- Environment Management Plan (condition 191); and
- Emergency and Evacuation Plan (condition 205).

The conditions of approval required the SWPS to be reviewed in 2011, 2016 and 2021 by the co-proponents being Mawland Quarantine Station Pty Ltd and NPWS. They were not reviewed. In 2022, DPHI directed NPWS that the plans be reviewed.

As such, these plans are currently being updated by NPWS and NHS. The review process commenced late 2022 / early 2023. Once the updated SWPs are endorsed, these will replace the abovementioned list as relevant.

Further detail on the current site operations and daily activities at the Q Station site as outlined in the table below. Importantly, the continuation of these activities is sought as part of this REF as they are integral to the ongoing operation of the Q Station in accordance with the key site activities.

These activities will continue to be undertaken in accordance with the management measures listed within the relevant Site Wide Plan. Notwithstanding, the management measures outlined within the supporting reports to this REF are also relevant to the ongoing operation of the site:

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
Visitor access		
<ul style="list-style-type: none"> • There are 2 car parks at Q Station: <ul style="list-style-type: none"> ○ CP1 at reception/entrance with 120 spaces for all visitors and hotel guests ○ CP5 within the site with 56 spaces for Q Station vehicles, staff and guests • For most arriving visitors parking is in CP1. Access into the site is then either walking or use of the Q Station shuttle bus. • There is a boom gate at reception (A26), to manage vehicle access into the site. • Staff are permitted to drive on site to access CP5 for staff parking and drive Q Station vehicles as necessary to their position. • Contractors are permitted to drive on site when necessary. • Guests staying in cottages can drive and park in designated parking areas adjacent to their cottage. • If a driver is permitted to drive on site (i.e. staff, contractor or cottage guest) a site induction must be completed prior to entering. • The Q Station shuttle provides a free transport in and out of Manly. This is timetabled and details are found on the Q Station website. • Arrival to the site via ferry is not currently possible. • Groups are encouraged to visit Q Station via private coach or bus. Small buses up to 22 seats with private groups attending a Q Station event or tour are permitted to drive into the site where the group has limited mobility. These small buses are escorted by a Q Station shuttle into the site. 	<p>Endorsed:</p> <ul style="list-style-type: none"> • Visitor Management Plan, March 2005. • Site Travel and Access Plan 2018 <p>Draft:</p> <ul style="list-style-type: none"> • Refer mitigation measures in the Environment and Heritage Site Wide Management 2023: Appendix 10 Access Strategy Sub Plan (draft). 	<ul style="list-style-type: none"> • Consult with tertiary institutes to initiate trials of new and advancing technology designed to mitigate wildlife vehicle collisions.
Visitor management		
Site capacity	Endorsed:	<ul style="list-style-type: none"> • Ensure mitigation of light spill impacts are updated to use the

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
<ul style="list-style-type: none"> The current capacity limit for the site has been set by the current CoPA to be optimally 315pax with a maximum of 600 pax at any one time. This includes staff and guests. Two community open days are held each year. On each day a program of free tours, talks and activities is available for the community to book and attend. The QSCCC meets at Q Station 4 time a year. It consists of an independent chair, representatives from NHS, NPWS and local community stakeholder groups. <p>Visitor Centre and Museum</p> <ul style="list-style-type: none"> Building A14-17 within Wharf precinct houses a free Quarantine Exhibition, Tours Desk, café and public toilets. The Tours desk is staffed 10am-4pm every day for visitor information & enquiries, assistance and tour booking. The café is open from 8am every day serving coffee, light meals and snacks. <p>Tours</p> <ul style="list-style-type: none"> The current tours on offer at Q Station can be divided into history, ghost and education programs. All education, public and private tour information can be found on the Q Station website. Bookings for public tours can be made through the website. Changes to specific tour schedules and content are based on demand and seasonality, however in general the tours run as follows: <ul style="list-style-type: none"> Quarantine Wander History Tour – 11am daily Disease and Burial History Tour – after dark Ghostly Encounters Tour – 2.5 hours Wednesdays Ghost trackers Family Tour – 2 hours Friday & Saturday Paranormal Investigation – 3.5 hours Thursday evening Private tours for in house conferences and other external social or corporate groups are also available. Booking requests managed individually. The site held 19000 tour guests in 2023. 	<ul style="list-style-type: none"> Visitor Management Plan, March 2005. Site Travel and Access Plan 2018 Interpretation Plan, 2005. Infrastructure Control Plan 2008 Moveable Heritage and Resources Plan <p>Draft:</p> <ul style="list-style-type: none"> Refer to the Environment and Heritage Site Wide Management 2023: Appendix 10 Access Strategy Sub Plan (draft) Refer to the Infrastructure Control Plan (Appendix 7) Outdoor Visitor Infrastructure (Appendix 18) Security Plan (Appendix 16) Refer to the Environment and Heritage Site Wide Management 2023: Appendix 7 Interpretation Sub Plan (draft). 	<p>most recent advancements and guidelines</p> <ul style="list-style-type: none"> It is recommended that lighting design for outdoor visitor infrastructure and buildings in the Wharf Precinct be reviewed and where applicable revised with consideration to the <i>National Light Pollution Guidelines for Wildlife Including marine turtles, seabirds and migratory shorebirds January 2020 Version 1.0</i> (

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
<p>Education programs</p> <ul style="list-style-type: none"> The site holds educational programs for primary and secondary students. These programs involve exploring the natural and built environment, handling artefacts, following paths of migration on large maps, experiencing past technologies, interacting with primary sources, playing games and hearing stories. The Environment and Cultural Centre (A9 & A11) is also used as part of educational programs offered at the site. Groups are able to stay in the hotel accommodation. Buildings commonly used are P21, P22 or P23 or cottages, however this depends on the numbers, gender, staff to student ratio and other requirements of the school. 		
<p>Accommodation</p> <ul style="list-style-type: none"> Q Station currently provides 105 rooms and 9 cottages as guest accommodation. Accommodation can be booked directly with Q Station, through Accor Hotels website and a range of third party providers. Rates vary dependent on season, demand and duration of stay. Q Station regularly offers packages to guests which include accommodation and a range of other on-site benefits or activities. All guests have access to the following guest lounges: A28 Carpenters Lounge, P5 Former First-Class Dining Room and P6 Former First Class Kitchen Room. The Isolation Guest Lounge is available only to guests staying in the Isolation Precinct. In the period Dec 2022 to Nov 2023, 43712 people stayed at Q Station. Average room occupancy was 71%. 	<p>Endorsed:</p> <ul style="list-style-type: none"> Visitor Management Plan, March 2005. Infrastructure Control Plan 2008. Interpretation Plan, 2005. Internal Fitout Plan, Part 1, 2005 <p>Draft:</p> <ul style="list-style-type: none"> Refer to the Environment and Heritage Site Wide Management 2023: Appendix 10 Access Strategy Sub Plan (draft). Refer to the Environment and Heritage Site Wide Management 2023: Appendix 17 Emergency and Evacuation Plan (draft). 	<ul style="list-style-type: none"> N/A

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
	<ul style="list-style-type: none"> Refer to the Environment and Heritage Site Wide Management 2023: Appendix 16 Security Management Plan (draft). Refer to the Environment and Heritage Site Wide Management 2023: Appendix 6 Infrastructure Control Sub Plan (draft). Refer to the Environment and Heritage Site Wide Management 2023: Appendix 7 Interpretation Sub Plan (draft). Refer to the Internal Fitout Plan (appendix 4) (draft) 	
Conferences, functions and events		
<p>Q Station hosts a range of conferences, functions and events over the year, with the potential of up to 45% of total revenue being generated in this way. The follow 11 buildings are available for meetings and functions: P3, P7, P10, P12, P15, P16, P27, A2 & H1A.</p>	<p>Endorsed:</p> <ul style="list-style-type: none"> Visitor Management Plan, March 2005. Noise Management Plan, 2005. <p>Draft:</p> <ul style="list-style-type: none"> Refer to the Environment and Heritage Site Wide Management 2023: Appendix 10 Access Strategy Sub Plan (draft). Refer to the Environment and Heritage Site Wide Management 2023: Appendix 12 Noise Management Plan (draft). 	N/A

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
	<ul style="list-style-type: none"> Refer to the Environment and Heritage Site Wide Management 2023: Appendix 17 Emergency and Evacuation Plan (draft). Refer to the Environment and Heritage Site Wide Management 2023: Appendix 16 Security Management Plan (draft). 	
Food facilities and preparation		
<p>A6:</p> <ul style="list-style-type: none"> The Boilerhouse Kitchen and Bar is a restaurant which operates out of building A6. Operating hours are outlined below: Opening Hours: <ul style="list-style-type: none"> Monday & Tuesday: Closed Wednesday – Friday: 4pm – 9pm Saturday & Sunday: 12pm – 9pm The Engine Room bar at the beachside end of A6 offers a casual dining option for lunch, dinner or refreshments. Opening hours are as follows: <ul style="list-style-type: none"> Friday 4pm-9pm Saturday & Sunday 11am -5:30pm The kitchen for the Boiler house and Engine Room bar is located within A6. <p>P12 & P13</p> <ul style="list-style-type: none"> A restaurant is located in building P12. Food preparation is conducted in neighbouring building P13. This restaurant/food prep provided buffet breakfast for guests every morning from 7am. <p>A14 & A17</p>	<p>Endorsed:</p> <ul style="list-style-type: none"> Visitor Management Plan, March 2005. Noise Management Plan, 2005. Waste Management Plan, 2005. Infrastructure Control Plan Part 1, 2008. Predator and Pest Animal Plan, 2008. <p>Draft:</p> <ul style="list-style-type: none"> Refer to the Environment and Heritage Site Wide Management 2023: Appendix 10 Access Strategy Sub Plan (draft). Refer to the Environment and Heritage Site Wide Management 2023: Appendix 12 Noise Management Plan (draft). Refer to the Environment and Heritage Site Wide Management 	N/A

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
<ul style="list-style-type: none"> ○ A café (known as the 'Wharf Café') is located inside A14-17 and forms part of the Visitor Centre complex in the Wharf precinct. ○ Opening hours are Sunday-Tuesday 8am-5pm and Wednesday-Saturday 8am-4pm. ○ Food preparation for this café is completed in P13 and then delivered to the café each day. <p>A20</p> <ul style="list-style-type: none"> ○ A kitchen is located within A20. This kitchen is used on demand only for events and functions. <p>Q Station vehicles are used to transport food to all locations outside of immediate venues.</p>	<p>2023: Appendix 17 Emergency and Evacuation Plan (draft).</p> <ul style="list-style-type: none"> • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 13 Waste Management Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 6 Infrastructure Control Sub Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 9 Predator and Pest Control Sub Plan (draft). 	

Staff and training

<p>There are currently 140 staff employed at the site. This includes a mix of permanent full time and part or casual roles.</p>	<p>Endorsed:</p> <ul style="list-style-type: none"> • 2006 Inscriptions Management Plan (IMP) prepared by Simon MacArthur • Visitor Management Plan, March 2005. • Noise Management Plan, 2005. • Waste Management Plan, 2005. • Infrastructure Control Plan Part 1, 2008. • Aboriginal Heritage Management Plan, 2009. • Predator and Pest Animal Plan, 2008. 	<ul style="list-style-type: none"> • Induction to be refreshed with updated flora and fauna information
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Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
	<ul style="list-style-type: none"> • Movable Heritage and Resource Collection Plan, 2007. • Site Access and Travel Plan 2018 • Conservation Works program • Interpretation Plan 2005 • Heritage and Landscape Management Plan <p>Draft:</p> <ul style="list-style-type: none"> • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 10 Access Strategy Sub Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 5 Inscription Management Sub Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 12 Noise Management Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 17 Emergency and Evacuation Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 13 Waste Management Plan (draft). 	

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
	<ul style="list-style-type: none"> • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 16 Security Management Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 6 Infrastructure Control Sub Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 3 Aboriginal Heritage Management Sub Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 8 Moveable Heritage Collection Sub Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 9 Predator and Pest Control Sub Plan (draft). • Refer to the Interpretation Plan (Appendix 7) 	
Environmental		
<p>Waste management</p> <ul style="list-style-type: none"> • Waste and recycling bin storage is located at the end of CP5. • On site bin collection and replacement is completed by housekeeping team. • Contractor's empty full bins accumulated in CP5. 	<p>Endorsed:</p> <ul style="list-style-type: none"> • 2006 Inscriptions Management Plan (IMP) prepared by Simon MacArthur. 	<ul style="list-style-type: none"> • Sound reduction barriers are recommended to provide additional protection to the little penguin breeding

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
<p>Maintenance/conservation</p> <ul style="list-style-type: none"> • Specific maintenance tasks on site are logged through the inhouse Protel system. • Daily report tasks are attended to by maintenance team in the first instance. • Specialised trades eg electrical, plumbing services are contracted when appropriate. • Regular use and inspection of buildings and infrastructure also informs ongoing maintenance requirements such as painting of buildings, drain clearing, road potholes. • Repairs to buildings and infrastructure are carried out in line with CWP guidelines. • Mown areas are subject to ongoing grass cutting. Weeding and other gardening tasks are predominately carried out in the immediate garden beds adjacent to buildings or on the periphery of the mown areas. • Pest control. 	<ul style="list-style-type: none"> • Visitor Management Plan, March 2005. • Noise Management Plan, 2005. • Waste Management Plan, 2005. • Infrastructure Control Plan Part 1, 2008. • Aboriginal Heritage Management Plan, 2009. • Predator and Pest Animal Plan, 2008. • Movable Heritage and Resource Collection Plan, 2007. • Sampling and Asbestos Strategy, 2005. • Erosion and sedimentation control plan, 2005. <p>Draft:</p> <ul style="list-style-type: none"> • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 5 Inscription Management Sub Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 18 Outdoor Visitor Infrastructure Sub Plan (draft). • Refer to the Environment and Heritage Site Wide Management 	<p>habitat adjacent to the Boilerhouse Restaurant.</p> <ul style="list-style-type: none"> • Little penguin habitat at northern end of QS Beach - Fencing does not provide penguin access to habitat reported to occur further south of fence line. • Leaf litter at fence has choked any ground access further south, which needs to be ameliorated and monitored on a regular basis. • Habitat enhancement and artificial nest installations to be undertaken in consultation with specialists.

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
	<p>2023: Appendix 12 Noise Management Plan (draft).</p> <ul style="list-style-type: none"> • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 16 Security Management Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 13 Waste Management Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 14 Asbestos Sampling Management Strategy (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 6 Infrastructure Control Sub Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 3 Aboriginal Heritage Management Sub Plan (draft). • Refer to the Environment and Heritage Site Wide Management 2023: Appendix 8 Moveable Heritage Collection Sub Plan (draft). • Refer to the Environment and Heritage Site Wide Management 	

Operation	Management and mitigation measures	
	Site wide plans	Additional/recommended measures
	<p>2023: Appendix 9 Predator and Pest Control Sub Plan (draft).</p> <ul style="list-style-type: none"> Refer to the Environment and Heritage Site Wide Management 2023: Appendix 11 Erosion and Sedimentation Control Sub Plan (draft). 	

3.2.1 Preferred Activity Statement

In addition to the site wide plans, a number of other important documents guide the use and operation of the site. These include the Preferred Activity Statement (PAS) which was produced in 2002 by Mawland during the environmental assessment of the proposed activities at the site. In summary, the PAS serves to:

- describe the proposed activities after taking into consideration submissions from the Mawland EIS
- assess the differences between the Preferred Activity and the previous Mawland EIS Proposal;
- assess the environmental impacts of the changes; and
- justify the adoption of those differences and recommends that the modified Proposal should proceed.

Whilst the PAS relates to the proposal at that time, it includes relevant information on the interpretation of the site as well as specific physical requirements of areas and buildings within the site.

Importantly, no changes to the PAS are proposed as part of this REF. A review of the PAS will be subject to future consideration. NHS will work with NPWS to determine the format that this document should take.

4 Proposed activity

4.1 Location of activity

Description of location	The site is located at 1 North Head Scenic Drive, Manly, as shown in Figure 1. The site is part of the Sydney Harbour National Park and the area which the lease applies is approximately 27.5 hectares (ha).
Site commonly known as	Quarantine Station or Q Station.
Park name	Sydney Harbour National Park
Lot/DP	100/-/DP1075571
Street address	1 – 3 North Head Scenic Drive, Manly

4.2 Description of the proposed activity

The proposed activity seeks:

- to obtain a new planning approval under Part 5 of the EP&A Act and Clause 171 of the EP&A Regulation for the ongoing operation of the Quarantine Station for cultural tourism purposes beyond 2024, consistent with the intent and scope of the existing consent
- to rationalise the requirements of the planning approval in order to provide a streamlined, contemporary and more workable approval for both NHS and NPWS.

This will provide an opportunity to streamline the heritage management processes to ensure the heritage significance will be protected to a greater extent and Quarantine Station can continue to operate effectively and responsibly into the future.

No changes are proposed to the current approved Key Site Activities as outlined in the current conditions of approval nor are any new physical works proposed under this REF.

4.3 Current Conditions of Planning Approval

On 23 December 2003, the then Minister for Environment granted approval for the adaptive re-use of the North Head Quarantine Station under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act) (08_0041).

This approval, which has since been modified on two occasions, provides that the site can be used for a range of 'Key Site Activities' including:

restaurant, tourist accommodation, visitor centre & museum, guided tours, environmental and cultural study centre and functions and events.

As outlined earlier, no changes are proposed to the Key Site Activities under this REF. Notwithstanding, as part of the preparation of this REF, the Conditions of Planning Approval (COPA) has been reviewed and discussions held with NPWS regarding a new set of conditions for the ongoing operations at the site (if approved).

If the REF is approved, NPWS will develop a new set of conditions with the new planning approval. It is anticipated that these new conditions will provide a more streamlined, contemporary and workable approval for ongoing operations at the site.

In summary, the anticipated changes to the current COPA will:

- ensure that site operations are conducted with strong consideration for the cultural heritage of the site are grounded in current heritage best practice
- mitigate potential impacts on the heritage resource
- reflect a commitment to the sustainable future of the site
- emphasise the importance of environmental stewardship to mitigate potential impacts on the local wildlife and natural surroundings
- seek to streamline the planning process and operation of the site
- remove duplication of conditions
- remove conditions which have been satisfied through the establishment of the heritage management documents and site wide plans and replace them with conditions that require ongoing operation of the site be consistent with those documents and plans
- remove conditions which have been satisfied by the previous leaseholder and/or are no longer relevant to the ongoing operation of the site
- potentially include specific operational requirements which have been identified in consultant reports during this REF process; including:
 - formalising access to the site via water, including kayaks and standup paddle boards as well as small recreational vessels to dock at the wharf. Mitigation and management measures are in place (refer to STAP at Appendix 3) of which NHS are willing to accept as a condition of approval.
 - formalising the provision of (some) private vehicle usage within the site for visitors staying within the Cottages only. Mitigation and management measures are in place (refer to STAP at Appendix 3) of which NHS are willing to accept as a condition of approval.

NPWS have provided NHS with a high-level review of the existing COPA in response to NHS' proposed changes.

5 Reasons for the activity and consideration of alternatives

5.1 Objectives and reasons for the proposal

NHS has a lease to operate the site for cultural tourism purposes until 2027, with an option(s) to extend until 2050. However, as noted, the current planning approval for the site expires in December 2024.

Ultimately, the objective of this REF is to secure approval for the ongoing operation of the site as follows:

- a new planning approval to enable the continuation of operations beyond December 2024 in keeping with the site's existing use and NHS's lease, and
- a review of the current planning approval for the site to provide a more contemporary and workable approval framework.

5.2 Consideration of alternatives

The following options were considered:

- **Option 1** - do nothing
- **Option 2** – pursue an application for the continued operation of the site, in accordance with the key site activities

An analysis of these options is outlined below:

Under a 'do nothing' option (Option 1), the operations at the site would cease after 23 December 2024. This would prevent the site from operating for cultural tourism purposes, despite the current lease enabling this until 2027 with options to extend.

It would also mean an end to current public access to and operations on the site which have been made possible by the significant investment that has been undertaken in conserving the site's heritage and other improvements to the site since the original planning approval. This would also prevent the ability for the site's culture and heritage to be understood and interpreted by the public.

For these reasons, Option 1 is discounted.

Given the current planning approval expires in December this year, there is no alternative to the proposed activity, other than Option 2. Justification for this pathway and option is further outlined in Section 5.3 below.

5.3 Justification for preferred option

As noted, continuing the operation of the site, in accordance with the key site activities is the preferred option.

The proposed activity will ensure ongoing public access to the site for cultural tourism purposes consistent with lease under the NPW Act and the *Sydney Harbour National Park Plan of Management 2012*. Further, it will allow the site to continue to provide jobs and contribute to the local and national economy as a popular tourist attraction.

The ecological, traffic, bushfire, cultural and historic impacts of the proposed activity have been assessed. These assessments have concluded that the potential impacts associated with continuation of the current operation can continue to be appropriately managed and do not preclude approval of ongoing operations at the site.

Whilst this approval could potentially be sought pursuant to Division 5.2 of the EP&A Act (State Significant Infrastructure (SSI) application), it is considered that the SSI pathway does not apply in this instance. The reasoning for the preferred planning pathway is outlined in Section 7.1.

The REF pathway provides an opportunity for a more streamlined and contemporary planning approval that reflects both current environmental standards and operational requirements. Such an approval, in combination with the requirements of the site's lease, will provide relevant environmental and other safeguards for the ongoing use of the site for cultural tourism purposes. This can include consideration of the duration of further approvals

The supporting reports, which form part of this REF, have assisted with this evaluation. In some instances, these reports have provided mitigation measures which, when implemented, will improve the operations of the site and further ensure no adverse impacts. These measures will be adhered to with the interest of improving site operations and protecting the natural and built environments and values at the site.

5.4 Site suitability

The proposed activity does not introduce any changes to the existing, approved use of the site for cultural tourism purposes, nor will there be any reduction in the level of public access to and use of the site or site capacity. Further, no new physical works are proposed as part of the REF.

The proposed ongoing operation will continue to remain suitable for the site for the following reasons:

- ongoing operation will remain consistent with the vision and objectives for the site, as outlined within the *Sydney Harbour National Park Plan of Management 2012*
- the ongoing operation will continue to promote:
 - the conservation of the built, Aboriginal and environmental heritage
 - the protection and conservation of the ecosystems and communities found at the site
 - encourage an understanding and appreciation of the biodiversity values
 - public appreciation and understanding of the site and its history

It is noted that the NPWS Guidelines require an evaluation against the *Sustainability assessment criteria for visitor use and tourism in New South Wales national parks* (Sustainability Assessment Criteria) when a new lease or license is sought. As the proposed activity does not involve the renewal of a lease (this has already been undertaken) and is only for continuation of an existing operation with no new works proposed, it is considered that the proposal is within the parameters of the Site Suitability Matrix in the Sustainability Assessment Criteria and a new assessment is not required.

Notwithstanding, in accordance with the Sustainability Guidelines, NHS is committed to improving the site's environmental performance of the site over time.

6 Description of Existing Environment

6.1 Natural values

6.1.1 Geology, geomorphology and topography

The Quarantine Station is located on the western side of North Head and generally faces west. The site is mostly sheltered from winds from the southwest, however elevated areas of the site experience ocean breezes. The geology of the site consists of sand dunes on top of a sandstone base, providing the site with infertile and easily eroded soils.

The steep topography of the site has heavily influenced the development the site.

The Aboriginal Heritage Due Diligence report prepared by AMBS (Appendix 6) as well as the endorsed site wide plans provide further detail on geology and topography in relation to the site.

Justifying the application of mitigation measures, quantifying residual impacts and determining the significance of the activity are addressed in Section 10 of this REF and within the SIS (Appendix 2).

6.1.2 Soil types and properties (including contamination)

The Quarantine Station is characterised by aeolian sand dunes overlaying sandstone.

There are a number of areas identified with contaminated soils at the site as outlined below:

- soil in proximity to building A18
- soil below the accommodation rooms in the First and Second Class Precincts
- soil between building A46 and the funicular inclinator ramp

The site wide plans such as the *Heritage Landscape Management Plan 2006* provide further information on the landscape and soil profiles at the site, including contamination as well as mitigation measures to minimise erosion and contamination risk.

The Aboriginal Heritage Due Diligence report prepared by AMBS also provides information on the soil properties (Appendix 6).

Justifying the application of mitigation measures, quantifying residual impacts and determining the significance of the activity are addressed in Section 10 of this REF.

6.1.3 Watercourses, waterbodies, wetlands, coasts, estuaries

The site is part of Sydney Harbour National Park, and the western side of the site is located directly on Sydney Harbour.

Two manmade water reservoirs are located at the site. The Upper Reservoir was established in early in the sites history and has a fence surrounding it and the associated buildings. The Lower Reservoir is a roofed reservoir and can be used for garden and emergency water supply on site.

Justifying the application of mitigation measures, quantifying residual impacts and determining the significance of the activity are addressed in Section 10 of this REF.

6.1.4 Biodiversity - Flora

6.1.4.1 Threatened ecological communities (TECs)

The SIS (Appendix 2) outlines the following:

Five Plant Community Types (PCTs) are mapped within the subject site are related to threatened ecological communities (TECs) listed under the BC Act and/or the Commonwealth EPBC Act.

PCT name (PCT ID)	Status
<i>Sydney Coastal Foreshores Gully Rainforest (PCT 3040)</i>	<i>Relates to the Commonwealth Littoral Rainforest and Coastal Vine Thickets of Eastern Australia TEC where it occurs within 2 km of coastline or on an offshore island or adjacent to a large body of saltwater subject to maritime influence and satisfies condition thresholds as per Section 4 of the Listing Advice.</i>
<i>Coastal Sands Littoral Scrub-Forest (PCT 3546)</i>	<i>PCT 3546 relates to the following:</i> <ul style="list-style-type: none"> <i>NSW Bangalay Sand Forest TEC when it occurs on marine sand as per paragraph 2 of the Final Determination and within the Sydney Basin or South East Corner bioregions (IBRA Version 4.0) as per paragraph 1.</i> <i>Commonwealth Littoral Rainforest and Coastal Vine Thickets of Eastern Australia TEC where it occurs within 2 km of coastline or on an offshore island or adjacent to a large body of saltwater subject to maritime influence and satisfies condition thresholds as per Section 4 of the Listing Advice.</i>
<i>Southern Sandplain Heath (PCT 3805)</i>	<i>Both PCT 3805 and 3806 relates to the following:</i> <ul style="list-style-type: none"> <i>NSW Eastern Suburbs Banksia Scrub TEC.</i> <i>Commonwealth Eastern Suburbs Banksia Scrub TEC where it occurs in Sydney Basin Bioregion between the Hawkesbury River and Stanwell Park as per Section 2.1 of the Conservation Advice. It must also satisfy the minimum condition thresholds set out in Section 2.3 of the Advice, relating to patch size and numbers of native species.</i>
<i>Sydney Coastal Sand Mantle Heath (PCT 3806)</i>	<i>It must also satisfy the minimum condition thresholds set out in Section 2.3 of the Advice, relating to patch size and numbers of native species.</i>
<i>Sydney Coastal Sand Swamp Scrub (PCT 3922)</i>	<i>Relates to the NSW Sydney Freshwater Wetlands TEC.</i>

Table 1: Threatened ecological communities (TECs) within the subject site (Source: Ecologique)



Figure 4: Indicative TECs in the subject site (Source: Ecologique)

6.1.4.2 Threatened Flora

Posidonia australis

The SIS (Appendix 2) outlines the following:

Posidonia australis, also commonly referred to as strapweed, is a type of seagrass that is endemic (native) to the temperate marine and estuarine waters of the southern half of Australia.

The species is found in the waters off the site as described in the SIS at Appendix 2.

Eucalyptus camfieldii

The SIS (Appendix 2) outlines the following:

Eucalyptus camfieldii, also known as Camfield's Stringybark, is a mallee or small tree listed as Vulnerable under both the BC Act and EPBC Act.

Several specimens of Camfield's Stringybark are located near the first fork of the entrance road (off the North Head Scenic Drive) within the site.

Acacia terminalis subsp. Terminalis

The SIS (Appendix 2) outlines the following:

Acacia terminalis subsp. terminalis is an erect or spreading shrub, 1-5 metres tall, which is listed as Endangered under both the BC Act and EPBC Act.

Within the site there are scattered specimens of *A.t.terminalis* occurring in areas of coastal scrub and open woodland, including in disturbed areas adjacent to carparks and roads.

6.1.5 Biodiversity – Threatened Fauna

The subject site contains an Area of Outstanding Biodiversity Value (AOBV), which was determined for the Manly little penguin population

6.1.5.1 Little Penguins

The SIS (Appendix 2) outlines the following:

Eudyptula minor (the little penguin) is the smallest of all penguins (~30-40 cm), generally weighing between 1 and 1.2 kg and standing about 30cm tall.

The little penguin is the only penguin to breed in Australia and is relatively common in the waters of southern Australia, breeding mainly on offshore islands. The population of little penguins located at North Sydney Harbour is the only known breeding population on mainland (Biosis, 2015).

A range of nest sites are utilised by the little penguins at Manly including under rocks on the foreshore, under seaside houses and structures, such as stairs, in wood piles and under overhanging vegetation including lantana and under coral tree roots, and nest boxes installed by the NSW NPWS.

The NSW Scientific Committee listed the population at Manly (in North Harbour) as endangered in January 1997. In December 2002 critical habitat was declared for the species that extends around Manly Point and from Cannae Beach to the eastern side of Little Manly Point (NPWS 2002). A recovery plan was prepared for the population, which documents known threats and management objectives (NPWS 2000).

Areas of declared critical habitat under now repealed Threatened Species Conservation Act 1995 (TSC Act), including little penguin and Wollemi pine declared areas, are now considered Areas of Outstanding Biodiversity Value (AOBV). AOBVs are special areas with irreplaceable biodiversity values that are important to the whole of NSW, Australia or globally. The relevant legislative provisions for AOBVs are Part 3 of the BC Act and BC Reg.

The area declared as critical habitat is shown in the figure below.

A detailed impact assessment of the proposed activity on the Little Penguin habitat is provided in the SIS at Appendix 2.

The application of mitigation measures, quantifying residual impacts and determining the significance of the activity are addressed in Section 10 of this REF.

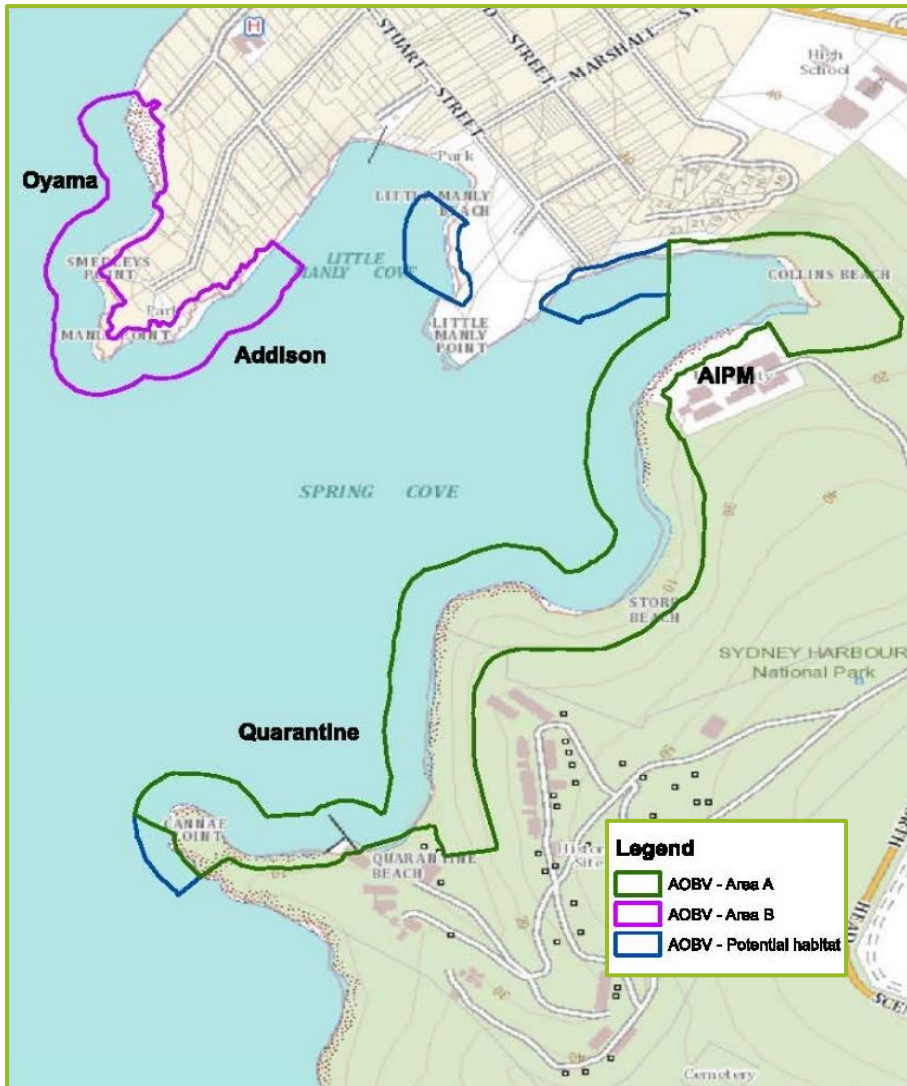


Figure 5: Little penguin critical habitat

6.1.5.2 Long-nosed bandicoot

The SIS (Appendix 2) outlines the following:

The long-nosed bandicoot is a medium-sized, ground-dwelling marsupial. Adults usually weigh approximately 750–1100 g, however, can range from 450–2050 g, with a head body length of 310–445 mm and a tail length of 120–160 mm (DAWE, 2021).

Long-nosed bandicoots live in forests and woodlands, and heath and are found in eastern Australia, from Queensland, New South Wales and Victoria. They were once widespread and common in Sydney. Today their range and distribution in the Sydney region is reduced and isolated populations remain in bush land areas to the north and south of Sydney. A small colony at North Head, Manly is classified as an ‘endangered population’. A Recovery Plan has been made but is still in draft form (DAWE, 2021).

Essentially a solitary animal that occupies a variety of habitats on North Head. Forages mainly at or after dusk, digging for invertebrates, fungi and tubers. The conical holes it leaves in the soil are often seen at the interface of naturally vegetated and areas of open grass around the Quarantine Station, former Defence Lands and Saint Patrick’s Estate. Shelters during the day in a well-concealed nest based on a shallow hole lined with leaves and grass, sometimes under debris, sometimes hidden with soil and with the entrance closed for greater concealment.

Monitoring indicates that the bandicoot population at North Head and including Q Station has increased over time and stabilised and the sex ratio of individuals had evened in 2022.

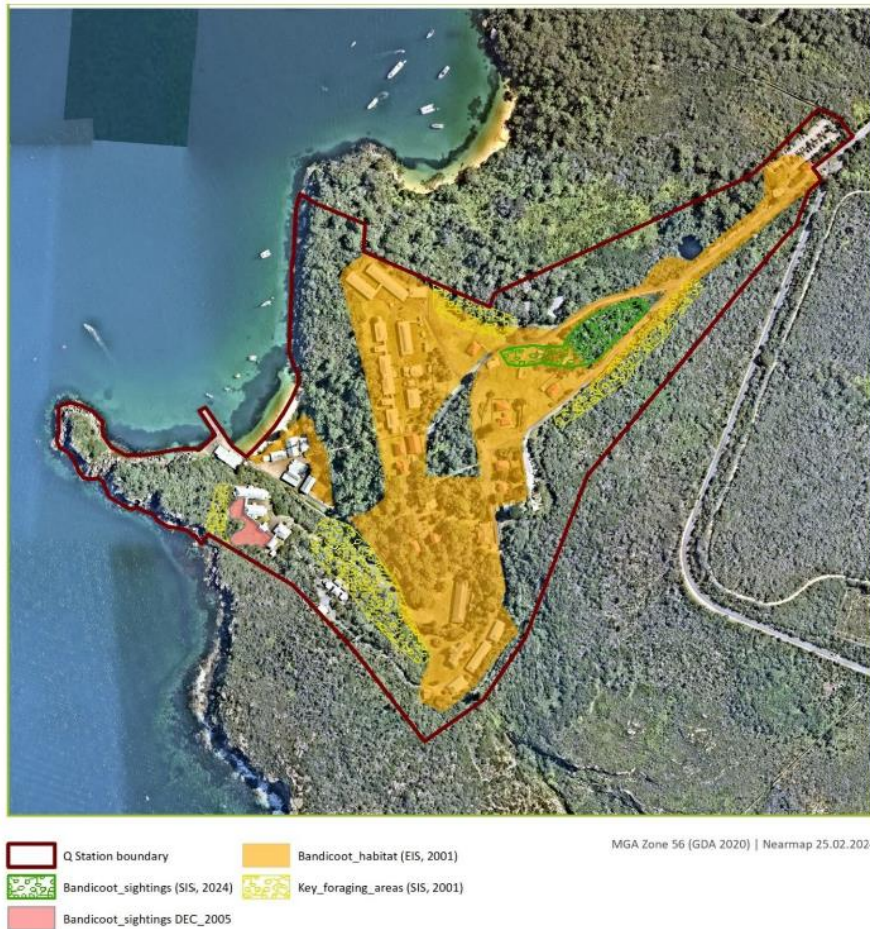


Figure 6: Location habitat areas (Source: Ecologique)

Mitigation measures, quantifying impacts and the significance of the activity are addressed in Section 10 of this REF.

6.1.5.3 Red crowned toadlet

The SIS (Appendix 2) outlines the following:

The red-crowned toadlet is currently listed as a vulnerable species on Schedule 2 of the BC Act. This status was assigned following a threat assessment of all vertebrate species in New South Wales (NSW) by Lunney et al. (2000). The species was considered vulnerable due to its low population size, low fecundity, habitat specialisation, low habitat availability, and that a large proportion of its range is affected by threatening processes (NSW Scientific Committee 2021).

They are conserved within National Parks throughout their range, including Bradleys Head, North Head and Dobroyd Head in Sydney Harbour, Berowra Valley, Blue Mountains, Brisbane Water, Bouddi, Dharug, Dharawal, Garigal, Heathcote, Ku-ring-gai Chase, Lane Cove, Manly Warringah War Memorial State Park, Murrumbidgee, Nattai and Royal National Parks.

The AWC surveys for the species at three locations within the northeast area of the headland and where hanging swamps have been maintained. These areas are relatively distanced from the subject site and may have been affected by the 2020 hazard reduction burns (that broke containment lines), as the species has not been recorded during biannual surveys following the fire (although its presence was heard incidentally during 2022 surveys).



Figure 7: Potential red-crowned toadlet habitat (Source: Ecologique)

Mitigation measures, quantifying impacts and the significance of the activity are addressed in Section 10 of this REF.

6.1.5.4 Eastern pygmy possum

The SIS (Appendix 2) outlines the following:

Eastern pygmy-possums are tiny (15 to 43 grams) active climbers, with almost bare, prehensile (capable of curling and gripping) tails, and big, forward-pointing ears. They are light brown above and white below. Adults have a head and body length between 70 - 110 mm and a tail length between 75 - 105 mm.

The eastern pygmy possum is listed as vulnerable under the NSW BC Act but is not listed under the EPBC Act

It is estimated that 45% of the pygmy possum's NSW distribution is within conservation reserves (OEH 2015 – Saving Our Species). The species is known to be conserved in a number of National Parks, including: Royal, Heathcote, Jervis Bay, Budderoo, Morton, Dharawal and, Brisbane Waters, Marramarra, Blue Mountains, Kanangra-Boyd National

Parks; Yerranderie SCA; and Barren Grounds, Dharawal, and Marramarra Nature Reserves.

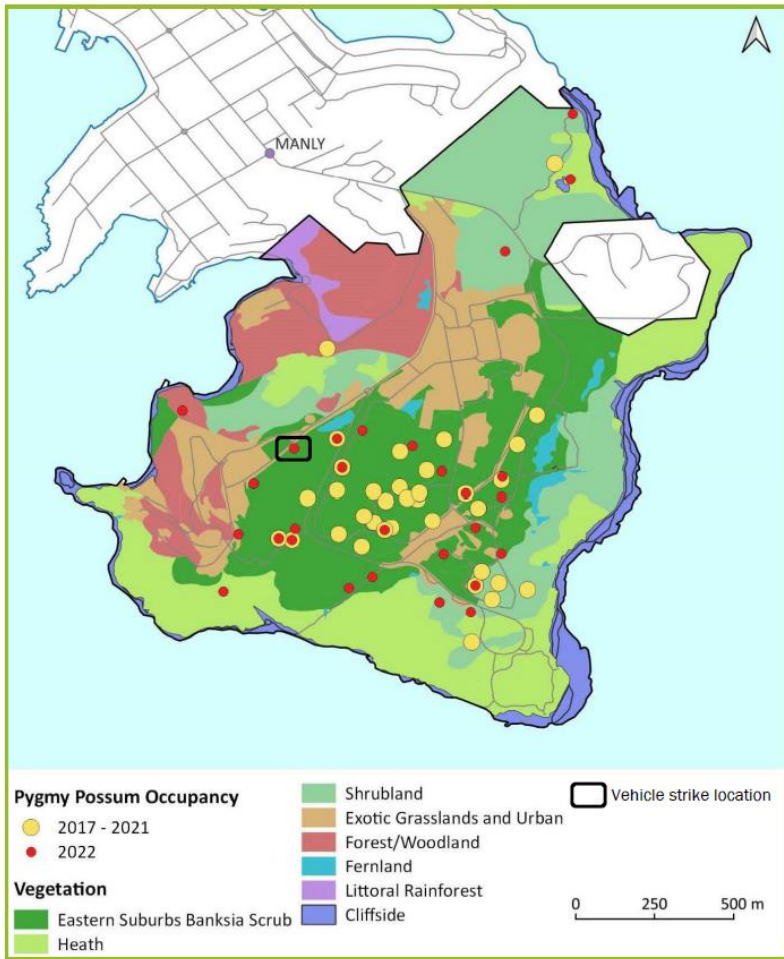


Figure 8: Eastern pygmy possum occupancy at North Head (Source: Ecologique)

Mitigation measures, quantifying impacts and the significance of the activity are addressed in Section 10 of this REF.

6.1.5.5 Environmental assets of intergenerational significance (AIS)

The site is not located within an AIS site.

6.2 Cultural values

6.2.1 Aboriginal cultural heritage

Aboriginal cultural heritage values at the site are outlined in the Aboriginal Heritage Due Diligence Assessment at Appendix 6.

The outcomes of the community consultation and site inspections are provided at Section 9 of this report and within the Aboriginal Heritage Due Diligence Assessment at Appendix 6. This report and consultation determined an Aboriginal Heritage Impact Permit (AHIP) is not required for the REF, however may be required in relation to future works at the site if any future Aboriginal Cultural Heritage Assessment (ACHA) determines that harm will occur to Aboriginal objects.

Consultation with the relevant community groups will continue to occur as the vision for the site is realised, that is, through future works and associated approvals processes.

The Aboriginal Heritage Due Diligence Assessment (Appendix 6) outlines the following:

There are no declared Aboriginal Places within the study area. The “Guringai Resting Place – Quarantine Station” is listed on the SHR as a culturally sensitive site, located within the Sydney Harbour National Park, adjacent to the study area. The exact location of which is restricted at the request of the Aboriginal Community. It contains the ancestral remains of Aboriginal people and evidence of past Aboriginal occupation including campsites and rock engravings. There are several AHIMS sites located in the local area, 12 previously recorded within the study area itself.

Further details are provided in the Aboriginal Heritage Due Diligence report at Appendix 6, however this report confirms there are no expected implications on these sites as a result of the proposed activity.

Mitigation measures, residual impacts and the significance of the activity are also addressed in Section 9 of this REF.

6.2.2 Historic heritage values

The site is included on the National Heritage List, NSW State Heritage Register (as located within North Head) and the heritage schedule of the MLEP 2013. The heritage significance of the site and its components is clearly identified in the site wide plans that govern the site’s operations. These site wide plans have protected the site’s cultural heritage resource since they were endorsed in 2005-2007.

Justifying the application of mitigation measures, quantifying residual impacts and determining the significance of the activity are addressed in Section 10 of this REF.

6.3 Social values

6.3.1 Recreation values

The site has a range of recreational values that are associated with iconic, cultural and urban areas at the site. Visitor opportunities at the site include dining, a range of accommodation types, guided tours, function and conference venues, a visitor centre and educational programs.

The site holds a number of events throughout the year and is also often visited by people in association with other events unrelated to the site, given its vantage point overlooking the harbour.

Many areas of the site are protected and not accessible to the public given their ecological, cultural and historic value. Notwithstanding, physical activity is commonly associated with the site with many pathways and tracks allowing protected areas to be viewed, without being disturbed. These pathways and tracks also connect the site to other areas, including North Head and Manly Village.

The site includes one beach, ‘Quarantine Beach’, where swimming and other beach and water activities are possible.

6.3.2 Scenic and visually significant areas

The site is recognised as being a visually attractive setting of natural bush and harbour views.

The vegetation and sandstone cliff geomorphology within the Quarantine Station are an integral part of the scenic and visual significance of the site and broader North Head area.

Appreciation of the site is possible both from on and offshore. It is especially notable upon entrance to South Head and Middle Harbour.

6.3.3 Education and scientific values

North Head Quarantine Station is a significant historic place. It embraces educational themes of immigration, disease, changes in medical technology, and demonstrates changing attitudes to health, social and cultural values.

Public education and interpretation facilities have been integrated throughout the site to assist visitors in understanding, appreciating and protecting the site's values.

The site is frequently visited by school groups on educational programs to encourage an understanding and interpretation of the site's history.

It provides opportunities for all visitors to study of coastal processes, ecology, threatened animal species and Aboriginal and European history.

6.3.4 Interests of external stakeholders

The interests of adjoining landowners and park visitors have been considered throughout the REF process as outlined in Section 4.

6.4 Matters of National Environmental Significance

6.4.1 National Heritage Listing

North Head Sydney (comprising the Q station) is listed on the National Heritage List under the EPBC Act. As outlined in the figure below:

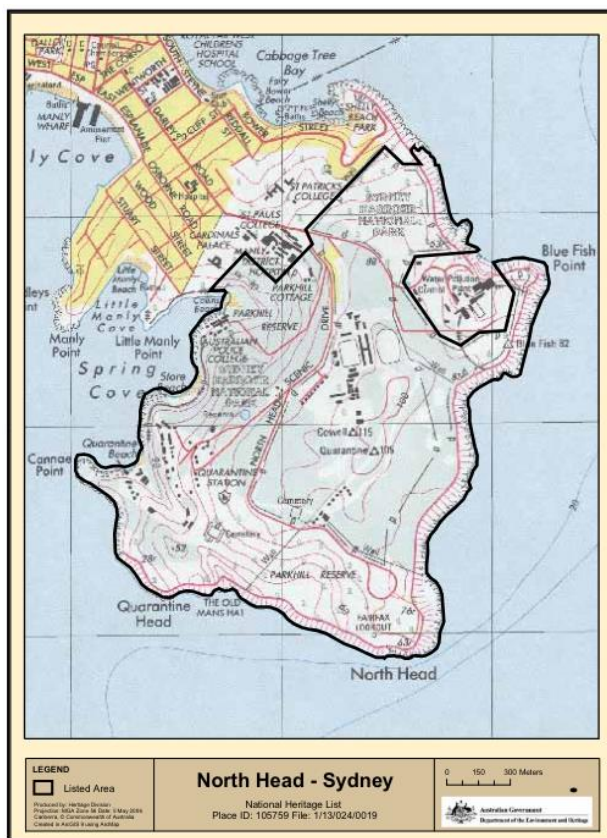


Figure 9: National Heritage Listing Boundary (Source: DCCEW)

An extract of the Statement of Significance is provided below. The full Statement of Significance is provided within the HIS.

North Head has long been recognised as the entrance to one of the world’s most picturesque harbours, Port Jackson, and has been portrayed by artists such as Augustus Earle from as early as 1825... The major groups of buildings, although of a similar age as surviving complexes in other states, are rare in terms of their range and relative integrity. For instance, the Superintendent’s Residence at North Head, built in 1854, appears to be the earliest surviving, purpose-built, quarantine-related structure in Australia. The layout of the station, including its buildings, roads, fences and cemeteries, was designed to separate the quarantined passengers on the grounds of health, as well as social and cultural background. For example, the first, second and third class passengers were separated into barracks-style accommodation in different areas.... The station’s facilities show how the area developed according to scientific responses to disease outbreaks. The smallpox epidemic of 1881, for example, resulted in new facilities such as a hospital, and stricter zoning by fences. The Quarantine Station was added to the Sydney Harbour National Park in 1984.

Approval under Chapter 2, Part 3, Division 1 of the EPBC Act is required for any action occurring within, or outside, a National Heritage place that has, will have, or is likely to have a significant impact on the National Heritage values of the National Heritage place.

Accordingly, an assessment of significance in accordance with DCEWs *Significant Impact Guidelines* has been undertaken by Architectural Projects within the HIS (Appendix 4) and addressed further in Section 7.7. This assessment concludes that the ongoing operation of current site activities will not have a significant impact on the site’s National Heritage values and, therefore, approval under the EPBC Act is not required.

6.4.2 Threatened Ecological Communities

There are a number of Matters of National Environment Significance (MNES) that occur within the site, as outlined below:

Matter of National Environmental Significance	Status
Littoral Rainforest and Coastal Vine Thickets (PCT 3040 Sydney Coastal Foreshores Gully Rainforest)	Critically endangered
Eastern Sydney Banksia Shrubland (PCT 3805 Southern Sandplain Heath and PCT 3806 Sydney Coastal Sand Mantle Heath)	Critically endangered
The <i>Posidonia australis</i> seagrass meadows of the Manning-Hawkesbury ecoregion ecological community	Endangered
<i>Acacia terminalis</i> subsp. <i>terminalis</i> sunshine wattle	Endangered
<i>Eucalyptus camfieldii</i> Camfield’s stringybark	Vulnerable
<i>Pteropus poliocephalus</i> grey-headed flying fox	Vulnerable

Table 2: Matters of National Environmental Significance (Source: Ecologique)

Approval under Chapter 2, Part 3, Division 1 of the EPBC Act is required for any action with significant impact on listed threatened species or endangered community.

An assessment of significance in accordance with DCEWs *Significant Impact Guidelines* has been undertaken by Ecologique within the SIS (Appendix 2) and further addressed in Section 7.6 of this REF. This assessment determined that these species will not be at risk of any significant impacts from the continued operation of Q Station and, therefore, approval under the EPBC Act is not required.

Further assessment is provided in the SIS at Appendix 2.

7 Statutory Planning Framework

7.1 Planning Approval Pathway

The ongoing use of the Quarantine Station site for cultural tourism purposes and associated upgrade works can be assessed and approved subject to the provisions of Part 5 of the Environmental Planning & Assessment Act 1979 (EP&A Act) given the following:

- The site is zoned C1 National Parks and Nature Reserves under the *Manly Local Environmental Plan 2013* (MLEP 2013). Within this zone, uses authorised under the *National Parks and Wildlife Act 1974* (NPW Act) are permitted without consent.
- Section 2.73(1)(a) of *State Environmental Planning Policy (Transport and Infrastructure SEPP) 2021* (Transport and Infrastructure SEPP) states that development for any purpose may be carried out without consent on land reserved under NPW Act if the development is for a use authorised under that Act.
- The site is subject to a lease under section 151 of the NPW Act and its use for cultural tourism purposes is therefore authorised under that Act.
- Development permitted without consent under an environmental planning instrument requires an assessment of environmental impacts under Part 5 of the EP&A Act. This is undertaken through the preparation of a REF, which is evaluated by NPWS
- the proposed works associated with the ongoing use of the Quarantine Station for cultural tourism purposes have a capital investment value (CIV) of less than \$10 million and therefore are not classified as State Significant Infrastructure, in accordance with Clause 7, Schedule 3 of the *State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP) (refer to Section 7.4.2)

Therefore, the project is an activity in accordance with clause 5.1 of the EP&A Act because it involves the *carrying out of work* as defined under Section 1.4 of the EP&A Act and therefore requires an environmental assessment.

An SSI pathway, pursuant to Division 5.2 of the EP&A Act was considered during the initial planning stage. However, it was concluded that (for the reasons outlined above) the REF pathway was the preferred and most appropriate pathway to pursue.

7.2 Environmental Planning and Assessment Act 1979

Part 5 of the EP&A Act applies to activities that are permissible without consent and are generally carried out by a public authority. Activities under Part 5 of the EP&A Act are assessed and determined by a public authority, referred to as the determining authority. NPWS is a public authority and is the determining authority for the proposed works.

For the purpose of satisfying the objects of the EP&A Act relating to the protection and enhancement of the environment, a determining authority, in its consideration of an activity shall examine and take into account all matters affecting or likely to affect the environment by reason of that activity (refer to sub-section 1 of section 5.5 of the EP&A Act).

The Guidelines approved under Section 170 of the EP&A Regulation (Guidelines for Division 5.1 Assessments, June 2022) define the factors which must be considered when assessing the likely impact of an activity on the environment under Part 5 of the EP&A Act. Section 12 specifically responds to the factors for consideration under the Section 170 Guidelines.

7.3 Environmental Planning and Assessment Regulation 2021

Part 8, clause 171 of the EP&A Regulation provides a list of factors that must be taken into account for an environmental assessment under Part 5 of the EP&A Act. These requirements form the basis of this REF and are considered in detail at Section 10 of this REF report.

7.4 State Environmental Planning Polices

7.4.1 State Environmental Planning Policy (Transport and Infrastructure) 2021

Section 2.73(1)(a) of the Transport and Infrastructure SEPP states that development for any purpose may be carried out without consent on land reserved under NPW Act if the development is for a use authorised under that Act.

The proposed activity complies with Section 2.73(1)(a) as the site is reserved under the NPW Act and is for a use (cultural tourism) authorised under Section 151 of that Act.

Consultation has been undertaken in accordance with Part 2.2, Division 1 of the Transport and Infrastructure SEPP, specific details are outlined in Section 8 of this REF.

7.4.2 State Environmental Planning Policy (Planning Systems) 2021

Clause 7, Schedule 3 of the Planning Systems SEPP stipulates that certain development on reserved land under the NPW Act is to be classified as SSI, specifically development by a person other than a public authority:

- (a) *for a purpose authorised under section 151A(1)(b) of that Act, and*
- (b) *that has a capital investment value of more than \$10 million.*

However, the proposed works associated with the ongoing use of the Quarantine Station for cultural tourism purposes have a CIV of less than \$10 million and therefore are not SSI.

Given this, no further consideration under the Planning Systems SEPP is required.

7.4.3 State Environmental Planning Policy (Biodiversity and Conservation) 2021

Chapter 6 of the *State Environmental Planning Policy (Biodiversity and Conservation) 2021* (Biodiversity and Conservation SEPP) applies to land within the Sydney Harbour catchment, in which, the site is located within.

The provisions of Part 6.2 largely relate to development works, and given the nature of the proposal, an assessment against this section is not considered to be required.

Part 6.4 relates to heritage items within the Sydney Harbour Catchment. The site is not identified as comprising any of the identified items. Therefore, an assessment under Section 6.4 is not required.

Notwithstanding the above, an assessment against relevant factors is provided at Section 11.2 of this REF.

7.4.4 State Environmental Planning Policy (Resilience and Hazards) 2021

Chapter 2 of the *State Environmental Planning Policy (Resilience and Hazards) 2021* (Resilience and Hazards SEPP) applies to land within the coastal zone.

The site is identified as being within the coastal environment area and coastal use area, which form part of the coastal zone.

Given the proposed activity does not comprise any physical works or changes to the site operations (in particular safe access to the foreshore; Section 2.11), an assessment against Chapter 2 is not considered necessary.

7.5 Manly Local Environmental Plan 2013

The proposed activity is also permitted without consent under MLEP 2013 as the site is zoned C1 National Parks and Nature Reserves under MLEP 2013. Within this zone, uses authorised under the NPW Act are permitted without consent.

The site is identified as a local heritage item and comprises items of local heritage landscape significance, as prescribed in Clause 5.10 and shown in the figure below.



Figure 10: Heritage Map (Source: MLEP 2013)

As no physical works or changes to the site capacity are proposed, it is anticipated there will be no adverse impacts of the proposed activity on these items.

Importantly, the ongoing operation of the Quarantine Station will continue to conserve the built and environmental heritage of the site and is therefore, consistent with the objectives set out in Clause 5.10.

7.6 Commonwealth legislation

7.6.1 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) applies as the activity is on land that contains:

- national heritage values of a place on the National Heritage List
- nationally listed threatened and migratory species

Chapter 2, Part 3, Division 1 Requirements relating to matters of national environmental significance – Subdivision AA National Heritage

Approval under Chapter 2, Part 3, Division 1 of the EPBC Act is required for any action occurring within, or outside, a National Heritage place that has, will have, or is likely to have a significant impact on the National Heritage values of the National Heritage place. As noted above, the site forms part of the North Head Sydney, National Heritage listing.

Accordingly, an assessment of significance in accordance with DCEW's *Significant Impact Guidelines* has been undertaken by Architectural Projects within the HIS (Appendix 4) and addressed further in Section 10. The HIS finds:

When measured against significant impact criteria, it is demonstrated that the Proposed Action will not have a significant impact on the heritage values of the site.

The use of the site, the protection of heritage resources, and the approach to modification of buildings remains essentially unchanged. Any work will be carried out in accordance with the CoPA, the policies of the CMP and DACMP and the relevant SWPs to ensure any impacts on matters of environmental significance is acceptable.

The above assessment demonstrates that the proposed action is not likely to have a significant impact on historic heritage values of a National Heritage place. The proposed action is not considered to be a controlled action.

Chapter 2, Part 3, Division 1 Requirements relating to matters of national environmental significance – Subdivision C listed threatened species and communities

Approval under Chapter 2, Part 3, Division 1 of the EPBC Act is required for any action occurring that has, will have, or is likely to have a significant impact on the listed threatened species or endangered community. As noted, in table 2 critically endangered, endangered and vulnerable species are present at the site.

A Flora and Fauna assessment (Appendix 1) provides an assessment of potential impacts from the ongoing operation of the facility, and what actions will be undertaken to avoid, minimise or mitigate these impacts, on the site's biodiversity values.

The flora and fauna assessment (FFA) identified that the requirement for a Species Impact Statement (SIS) was triggered due to parts of the site located in an Area of Outstanding Biodiversity Value (AOBV), which was determined for the endangered little penguin (*Eudyptula minor*) population at Manly. Accordingly, an assessment of significance in accordance with DCEW's *Significant Impact Guidelines* has been undertaken by Ecologue within the SIS (Appendix 2).

The SIS finds:

- *The proposed ongoing operation of the facility does not involve any direct or indirect impacts that would adversely affect habitat of Littoral Rainforest and Coastal Vine Thickets and Eastern Suburbs Banksia Scrub of the Sydney Region.*
- *The proposed ongoing operation of the facility does not involve any clearing of vegetation and therefore there will be no anticipated direct impacts on the sunshine wattle.*
- *No clearing of vegetation is proposed and no changes in current management and maintenance activities are proposed that would reduce the quality or integrity of these communities or interfere with the recovery of these communities.*
- *No changes in current management and maintenance activities are proposed that would reduce the quality or integrity of these communities or interfere with the recovery of the species*
- *Ongoing weed management associated with the facility’s operation would have a positive impact on these communities*
- *Mandatory induction and ongoing training and review will be undertaken to ensure that the location and identification of the species is known to all landscape personnel and contractors engaged to work in or near locations where the species occurs.*

In regard to *Eucalyptus camfieldii*, the SIS notes that it only occurs as three individual specimens located within and adjacent to the subject site and does not constitute an important population of the species:

Notwithstanding, the proposed ongoing operation of the facility does not involve any clearing of vegetation or changes in current management and maintenance activities that would reduce the quality or integrity of E. camfieldii habitat, introduce invasive species or disease, or interfere with the recovery of E. camfieldii.

Ongoing weed management associated with the facility’s operation would have a positive impact on habitat for E. camfieldii and induction and training (as per the sunshine wattle) will ensure inadvertent disturbance or damage to the E. camfieldii specimens occur.

7.7 Other Relevant Legislation

7.7.1 National Parks and Wildlife Act 1974

The NPW Act establishes the NPWS, which is responsible for the control and management of all national parks, historic sites, nature reserves and Aboriginal areas (among others) in New South Wales (NSW). The main aim of the NPW Act is to conserve the natural and cultural heritage of NSW.

7.7.1.1 Objects of the NPW Act

The proposal is consistent with the objects of the NPW Act as it is considered to promote the orderly and economic use and development of land without resulting in an adverse impact on the environment. An assessment against the objects of the NPW Act is provided below.

Objective	Comment
(a) <i>the conservation of nature, including, but not limited to, the conservation of—</i>	The proposed activity will not result in significant impacts on biodiversity values within the site.
i. <i>habitat, ecosystems and ecosystem processes, and</i>	The operation of the site will continue in accordance with the site wide plans and monitoring requirements, which promote the

Objective	Comment
<ul style="list-style-type: none"> ii. <i>biological diversity at the community, species and genetic levels, and</i> iii. <i>landforms of significance, including geological features and processes, and</i> iv. <i>landscapes and natural features of significance including wilderness and wild rivers</i> 	<p>conservation of the site including, ecological habitats, communities, significant landforms and features.</p>
<p>(b) <i>the conservation of objects, places or features (including biological diversity) of cultural value within the landscape, including, but not limited to—</i></p> <ul style="list-style-type: none"> i. <i>places, objects and features of significance to Aboriginal people</i> ii. <i>places of social value to the people of New South Wales</i> iii. <i>places of historic, architectural or scientific significance</i> 	<p>The operation of the site will continue in accordance with the site wide plans and monitoring requirements.</p>
<p>(c) <i>fostering public appreciation, understanding and enjoyment of nature and cultural heritage and their conservation</i></p>	<p>The proposed activity will allow the site to continue to operate and therefore be accessible and open to the public to enjoy and appreciate, increasing awareness and understanding of the ecological and historical importance of the Q Station.</p> <p>One objective of the proposal is to continue to operate the interpretive tours, exhibitions and special events, which provide a strong emphasis on interpreting the past historical uses.</p>
<p>(d) <i>providing for the management of land reserved under this Act in accordance with the management principles applicable for each type of reservation.</i></p>	<p>The operation (and management) of the site will continue in accordance with the site wide plans and monitoring requirements.</p>

Furthermore, Clause 2A, Subclause (3) requires the consent authority to consider whether the proposed activity is within the public interest. As noted, the principal aim of the activity is to continue to allow operations and public access to the site, whilst managing environmental impacts.

It's also in the public interest that a lessee is running and maintaining the site and its values for ongoing use and enjoyment by the public.

For this reason, it is considered that the proposed activity is within the public interest.

7.7.1.2 Management Principles

Section 30E (1) outlines the purpose of reserving land as a national park is to identify, protect and conserve areas containing outstanding or representative ecosystems, natural or cultural features or landscapes or phenomena that provide opportunities for public appreciation and inspiration and sustainable visitor or tourist use and enjoyment so as to enable those areas to be managed.

The proposed activity will not impact the management of the site in accordance with principles outlined in Clause 30E, sub clause (2):

Section 30E	Project consistency
<p>a) <i>the conservation of biodiversity, the maintenance of ecosystem function, the protection of geological and geomorphological features and natural phenomena and the maintenance of natural landscapes</i></p>	<p>The proposed activity will not significantly impact on any threatened ecological communities or species or alter the geological and geomorphological features and natural phenomena of the park as identified in the SIS at Appendix 2. No physical works are proposed, and the current use of the site is not proposed to be intensified. Further no changes are proposed to the Key Site Activities or the site capacity.</p>
<p>b) <i>the conservation of places, objects, features and landscapes of cultural value,</i></p>	<p>The Aboriginal Heritage Due Diligence Assessment (Appendix 6) and Heritage Impact Statement (Appendix 4) do not identify any Aboriginal or European places, objects or features within the site that will be adversely impacted upon by the proposed activity.</p> <p>One objective of the proposal is to maintain the property which will help protect the heritage values from degradation. The lessee aims to conserve and potentially enhance the cultural values of the site.</p>
<p>c) <i>the protection of the ecological integrity of one or more ecosystems for present and future generations,</i></p>	<p>The proposed activity will continue to ensure the protection of the ecological integrity of ecosystems found at the site. The results of the SIS are provided at Appendix 2.</p>
<p>d) <i>the promotion of public appreciation and understanding of the national park's natural and cultural values,</i></p>	<p>The proposed activity will promote public appreciation and understanding of the site as it will ensure it can continue to operate and be accessible to the public into the future, where they can learn about the species of significance at the site, or the past heritage uses (both European and Aboriginal) through interpretation at the site.</p>
<p>e) <i>provision for sustainable visitor or tourist use and enjoyment that is compatible with the conservation of the national park's natural and cultural values,</i></p>	<p>The proposed activity will allow for sustainable tourist use and enjoyment by ensuring access to the site beyond the current approval (under a new planning approval).</p> <p>The proposed activity will not intensify or change the current capacity at the site. Qualified studies have been undertaken to confirm the ongoing operation of the site will not negatively impact the conservation of the site's natural and cultural values.</p>
<p>f) <i>provision for the sustainable use (including adaptive reuse) of any buildings or structures or modified natural areas having regard to the conservation of the national park's natural and cultural values,</i></p>	<p>No new physical works are proposed as part of this REF. The endorsed site wide plans will continue to govern operations at the site. Notwithstanding this, an Environmentally Sustainable Design (ESD) report has been prepared for the REF (refer Appendix 7) which confirms the site will continue to operate sustainably whilst also outlining recommended sustainability initiatives to implement at the site.</p>

Section 30E	Project consistency
	Current and ongoing operations already include the adaptive reuse of buildings and structures such as the boiler house and the accommodation buildings.
fa) <i>provision for the carrying out of development in any part of a special area (within the meaning of the <u>Hunter Water Act 1991</u>) in the national park that is permitted under section 185A having regard to the conservation of the national park's natural and cultural values,</i>	Not applicable.
g) <i>provision for appropriate research and monitoring.</i>	<p>The proposed activity will not restrict or prevent the appropriate research and monitoring of the site. Research and monitoring requirements will continue in accordance with the relevant conditions site wide plans, and it is also expected suitable conditions will be provided in the new planning approval.</p> <p>The proposal will not restrict research and monitoring and it may contribute obtaining usable data into the future.</p>

7.7.1.3 Sydney Harbour National Park Plan of Management 2012

In accordance with Part 5, Clause 81 of the NPW Act, all activities (except for activities undertaken under an existing interest) must be consistent with the Plan of Management for the Park in order for it to be legally permissible.

The proposed activity is consistent with the *Sydney Harbour National Park Plan of Management 2012* and *Sydney Harbour National Park Plan of Management Amendment 2012*. The proposed activity does not propose any activities or works which are not currently permissible at the site or permissible under the existing approval.

7.7.1.4 Leasing, licensing and easement provisions

The site is subject to a lease under Section 151A of the NPW Act and its use for cultural tourism purposes is therefore authorised under that Act.

The proposed activity does not propose any works outside the limits of the lease or permitted under Section 151A and in fact, seeks an approval which corresponds to the duration of the current lease and specified extensions. Therefore, no further consideration under this Part of the NPW Act is required.

7.7.1.5 Assets of Intergenerational Significance

The site is not identified as an asset of intergenerational significance (AIS) or is it in close proximity to an AIS as defined in Part 12A, Clause 153G of the NPW Act.

7.7.2 Biodiversity Conservation Act 2016

The proposed activity is consistent with the objectives of the *Biodiversity Conservation Act 2016* (BC Act).

The proposed activity will:

- conserve the biodiversity values at the site for the future
- have regard to the principles of ecological sustainable development
- encourage an understanding and appreciation of the biodiversity values at the site as well as the relationship of this biodiversity with Aboriginal knowledge

Under Section 3.1 of the BC Act, part of the site is identified as an area of outstanding biodiversity value (AOBV) as shown in the map below. This area relates to the Little Penguin Critical Habitat area which was identified as such in 2002 as shown in Figure 5 earlier.

Under Section 7.2 of the BC Act, an activity is defined as 'likely to significantly affect threatened species' if:

- the activity is carried out in a declared AOBV, or
- the test of significance at Section 7.3 of the BC Act determines that the proposal will significantly affect threatened species or ecological communities

The Flora and Fauna Assessment prepared by Ecologique identified that the requirement for preparing a SIS was triggered as part of the site located in an AOBV in relation to the endangered little penguin population at Manly.

Additional threatened species identified in the FFA that have the potential to be impacted by the facility's operation, as follows:

- Road mortality impacts on the long-nosed bandicoot endangered population at North Head and the threatened eastern pygmy possum
- Uncertain impacts on the red-crowned toadlet, a threatened species more recently discovered within the QS lease area
- Threatened flora species *Eucalyptus camfieldii* and *Acacia terminalis* subsp. *terminalis*
- The threatened Eastern Suburbs banksia scrub ecological community along with other plant communities are also included in the SIS.

Notwithstanding, the SIS found:

Monitoring has not indicated that the past operation of Q Station has been a causal factor in population decline of breeding population, despite the absence of breeding proximal to the Boilerhouse Restaurant building and outdoor eating area on Q Beach.

Evidence supporting that noise pollution emanating from the Boilerhouse Restaurant is unlikely to have contributed to the loss of breeding penguins at this location is provided in the following:

- *Relevant noise impact assessments and mitigation measures employed (see noise impact assessment provided by AKA Acoustics, 2024)*
- *Scientifically published studies and relevant literature review (refer Section 6.1.4.3 of the SIS)*
- *The loss of breeding activity from the AIPM property (near Collins Beach and distanced from the subject site)*
- *The decline in breeding pairs from other locations such as the Headland of Stores Beach (also distanced from the subject site)*

While impacts to the species were considered unlikely, the potential for impacts to occur should still be addressed within an adaptive management framework, including appropriate monitoring requirements and specific thresholds that trigger the need for management responses.

The proposed activity will not opt into the Biodiversity Offset Scheme which is established under Part 6 of the BC Act.

A summary of the findings of the SIS are outlined at Appendix 2.

7.7.3 Rural Fires Act 1997

In accordance with the *Rural Fires Act 1997* (RF Act), NPWS is identified as prescribed fire authority and is responsible for the control and suppression of all fires on lands that it manages.

Section 63 of the RF Act specifies that it is the duty of the owner or occupier of land to take the notified steps (such as any listed in a bushfire management plan) and any other practicable steps to prevent the occurrence of bushfires on, and to minimise the danger of the spread of bushfires on or from, that land.

No physical works are proposed as this REF; however a Bushfire Review has been prepared by Peterson Bushfire (Appendix 8) to demonstrate the ongoing operation of the site will be consistent with the RF Act.

The Bushfire Review notes that existing buildings often pre-date contemporary bushfire protection requirements and, in most cases, are unable to comply with the NSW Rural Fire Service (RFS) document 'Planning for Bush Fire Protection 2019' (PBP). Compliance with PBP is therefore not required.

Bushfire management planning for existing buildings and facilities is a risk-based exercise as adopted by agencies such as RFS for the state-wide bushfire risk management planning process and NPWS for reserve fire management planning. The bushfire risk is evaluated in the context of the landscape, the vulnerability of the asset/use, and constraining factors (e.g. environment and heritage), and a suite of risk mitigating measures is proposed and prioritised.

The '*North Head Precinct Fire Management Strategy 2009-2014*' (DEC 2009) and '*Manly, Mosman, North Sydney Bush Fire Risk Management Plan*' (Manly, Mosman, North Sydney Bush Fire Risk Management Committee 2010) were both prepared using a risk approach based on accepted methodologies designed to address bushfire risk to existing uses.

This fire management planning structure has been created and adopted to address bushfire risk for existing buildings and delivers an appropriate bushfire management framework for Q Station.

Bushfire risks associated with the proposed activity are considered in Section 10 of this REF.

7.7.4 Fisheries Management Act 1994

The *Fisheries Management Act 1994* (FM Act) provides for the protection, conservation and recovery of threatened species defined under the Act.

An assessment against threatened species has been undertaken within the SIS (Appendix 2). The SIS outlines the following:

All seagrasses, including P. australis, are protected within NSW waters (NSW DPI 2007).

In NSW P. australis in Port Hacking, Botany Bay, Sydney Harbour, Pittwater, Brisbane Waters and Lake Macquarie are listed as endangered populations in Part 2 Schedule 4 of the Fisheries Management Act 1994 (FM Act).

The Posidonia australis seagrass meadows of the Manning-Hawkesbury ecoregion ecological community is listed as endangered under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

The *Posidonia australis* seagrass patches in QS Beach do not meet the key condition thresholds to be considered a MNES under the EPBC Act. The *Posidonia australis* at the site is shown in the map below.



Figure 11: Location of *Posidonia* based on Marine Pollution Research (2023) findings (Source: Ecologique)

The SIS provides an assessment of impacts on the *Posidonia australis* in relation to the proposed activity. The SIS concludes:

*Based on available data and investigations (MRP 2023) and information (DPI Fisheries, Fisheries Scientific Committee) it is concluded that the proposed ongoing operation of the facility will not significantly impact on the *Posidonia australis* endangered population.*

Implementation of the approved seagrass monitoring program (MRP 2023) will be important in discriminating potential effects from the proposal against external impacts (such as waves and boat/ferry wash beyond Spring Cove).

It is also acknowledged that Berthing at the Q Station wharf is conditioned to minimise disturbance to seagrass, which includes:

- docking only at the head of the wharf (i.e. the north-western end)
- until such time as any future alterations to the wharf have been assessed and approved by the relevant authorities the ferry shall not moor at the wharf when not in active use (i.e. overnight)
- the ferry shall not moor at the wharf during unsuitable weather events (e.g., storms, strong winds, large swells)
- no vessel access on the south-western side of the wharf, parallel to Cannae Point

Preliminary consultation with Fisheries in relation to the proposed activity occurred on 12 April 2024. Further details of consultation with Fisheries in regard to the proposed activity is addressed in Section 8 of this REF and within the SIS at Appendix 2.

7.7.5 Heritage Act 1977

The Quarantine Station is included on the State Heritage Register (SHR), Listing Number 1003, which was gazetted on 2 April 1999. Statutory protection of the site is provided under the Heritage Act 1977. The HIS at Appendix 4 identifies that the proposed activity will have a positive impact on the heritage significance of the site.

The proposed activity is captured under Section 57(1)(e) as it is considered ‘*development*’ as it proposes ‘*the use of that land or of a building or work on that land*’.

On this basis, an approval under Section 60 is required. A Section 60 application will be submitted for the proposed activity and will be assessed by Heritage NSW.

7.7.6 Marine Estate Management Act 2014

The site directly adjoins the North (Sydney) Harbour Aquatic Reserve. Lands immediately adjacent to, or in the immediate proximity of, the coastal waters of the State that are subject to oceanic processes (including beaches, dunes, headlands and rock platforms) are defined as “marine estate” under the *Marine Estate Management Act 2014*, and therefore the relevant provisions of the *Marine Estate Management Act 2014* have been considered.

The proposed ongoing operation does not seek approval for development within the aquatic reserve. However, Section 56 (3) of the *Marine Estate Management Act 2014* requires an assessment to take into consideration the impact of carrying out of an activity within the locality.

The SIS (Appendix 2) notes regulations apply to land within North Harbour Aquatic Reserve, in which the site adjoins. These regulations are not relevant to the ongoing operation of the facility. Additional maritime regulations are in place that include:

- a 4 knot water vessel speed limit to minimise potential vessel strike impacts to little penguins
- no-anchoring zones in Spring Cove to protect seagrass beds
- vessel berthing protocols in place at the Q Station wharf to minimise disturbance to seagrass beds.

7.8 Summary of licences and approvals

This section summarises all the licences, permits and other approvals required under the above legislation.

7.8.1 Approval under the National Parks and Wildlife Act

The lease for the site is held by North Head Sydney Pty Ltd. This lease was granted under Section 151A of the NPW Act and is attached to this REF at Appendix 10.

7.8.2 Other approvals

In accordance with Section 57(1)(e) of the Heritage Act, an approval granted by the Heritage Council (Subdivision 1 of Division 3) is required for carrying out any development on land in relation to a listing on the State Heritage Register.

A Section 60 application will be prepared and sought accordingly.

It is anticipated the REF will be published on NPWS’ website in accordance with Section 171(4) of the EP&A Regulations and NPWS policy.

8 Consultation – Community & Stakeholder

8.1 Statutory consultation

8.1.1 Transport and Infrastructure SEPP

The Transport and Infrastructure SEPP requires consultation with relevant authorities as identified in the following table. Further justification is provided below the table where necessary.

Section	Trigger	Applicable to proposal?
Consultation with local council (s 2.10)	Development with impacts on council infrastructure or services (such as stormwater, sewer, water, roads and footpaths).	No
Consultation with local council (s 2.11)	Development with impacts on heritage items listed under the local environmental plan (LEP).	No. Refer below.
Consultation with local council (s 2.12)	Development that will change flood patterns on flood-labile land.	No
Consultation with State Emergency Service (s 2.13)	Development on flood-labile land.	No
Consultation with local council (s 2.14)	Development that is inconsistent with a certified coastal management program affecting land within the mapped coastal vulnerability area.	No
Consultation with NPWS (s 2.15(2)(a))	Development adjacent to land reserved or acquired under the NPW Act.	No. Refer below.
Consultation with NPWS (s 2.15(2)(b))	Development on land in Zone C1.	Yes. Refer below.
Consultation with Transport for NSW (s 2.15(2)(c))	Development comprising a fixed or floating structure in or over navigable waters.	No. Refer below.
Consultation with Transport for NSW (s 2.122)	Traffic-generating development listed in Schedule 3.	No

Consultation with local council (s 2.11)

Consultation with Council under the Transport and Infrastructure SEPP is not required as no impact on local heritage items are anticipated as a result of the proposed activity. Notwithstanding, preliminary consultation has been undertaken with Council for the REF. Further details of this consultation are provided at Section 8.

Consultation with NPWS (s 2.15(2)(b))

Section 2.15(2)(b) applies as the activity is located on land zoned C1. On this basis, NPWS must be consulted with and the requirements of Section 2.15(1) to be met.

These requirements will be met as follows:

- NPWS, Heritage NSW and DPHI Biodiversity, Conservation and Science Division have been consulted with as part of the REF preparation, as discussed in Section 8.2

- any notice received from these agencies will be taken into consideration

Consultation with Transport for NSW (s 2.15(2)(c))

TfNSW must be consulted with for development comprising a fixed or floating structure in or over navigable water.

Consultation with TfNSW under this section of the Transport and Infrastructure SEPP is not required as the proposed activity:

- does not relate to a fixed structure in navigable water (although the site includes a wharf, the proposed activity does not affect this aspect of the site)
- is not traffic generating development as no increase to the site capacity is proposed (refer Traffic Report at Appendix 3).

Notwithstanding the above, preliminary discussions have been held with TfNSW in relation to the REF. These discussions provided TfNSW the opportunity to comment on the proposed activity and highlight any issues to consider before the REF is formally lodged. An overview of their comments is provided at Section 8.2.

8.1.2 Consultation requirements for leases and licences

Public consultation under s151F and G the NPW Act is not required as the proposed activity does not require a new lease or license. NHS were granted the lease in 2022 and this process occurred at this time.

8.2 Government Agency Consultation

A summary of consultation carried out with government agencies during the proposal development process is provided in the table below.

Consultation	Outcome, comments and recommendations	Ongoing communication
Fisheries NSW	<ul style="list-style-type: none"> • On 30 April 2024, an email from Ecologique was sent to NSW Department of Primary Industries, Fisheries outlining the proposed scope of the REF, alongside a copy of the Draft SIS. • On 17 May 2024, DPI responded with general feedback on the SIS and recommendations where more information should be provided i.e. more information about the North Harbour Aquatic Reserve. • The final SIS adopted DPI's recommendations. 	
Transport for NSW	<ul style="list-style-type: none"> • On 12 April 2024, representatives from NHS and Stantec met with representatives from TfNSW's Property Asset Management division to discuss the REF for ongoing operation of the site. Prior to this meeting, Stantec had provided TfNSW with a copy of the draft Site Travel and Access Plan (STAP) for review. • The outcome of the meeting was positive as summarised below: <ul style="list-style-type: none"> ○ TfNSW raised no issues with the new Site Travel and Access Plan in relation to use of the wharf facility, located on TfNSW land. ○ TfNSW requested that any increase in ferry or vessel activities for Q-Station visitors via the wharf in the future will need to be in consultation with ferry operators and TfNSW Maritime Operations team. ○ TfNSW understood that the REF does not involve any works to the wharf and that these may be proposed in the future under a separate planning approval and subject to future consultation. 	<p>Agencies will be given the opportunity to comment during the formal exhibition.</p>
Heritage NSW	<ul style="list-style-type: none"> • On 18 March 2024, representatives from NHS, Keylan and Architectural Projects (heritage consultant) met with NPWS and Heritage NSW to discuss the REF for ongoing approval. • Key comments from Heritage NSW included: <ul style="list-style-type: none"> ○ process queries including how the REF relates to other works at the site ○ site wide plan updates and how this affects the REF 	<p>Heritage NSW will have opportunity for further feedback on submission</p>

Consultation	Outcome, comments and recommendations	Ongoing communication
	<ul style="list-style-type: none"> ○ a presentation to Heritage Council to occur as requested, and opportunity for this to be convened in May 2024 ○ details of the COPA review and agreed a more workable set of conditions is desired 	of Section 60 application, accompanying this REF.
Department of Planning, Infrastructure and Housing	<ul style="list-style-type: none"> ● On 24 May 2023, representatives from NHS, Keylan met with the Department of Planning, Infrastructure and Housing (DPHI) to discuss the transition of the existing approval to State Significant Infrastructure (SSI) and planning pathway for ongoing approval. ● DPHI raised no concerns with the proposed Part 5 process. 	
NPWS	<ul style="list-style-type: none"> ● On 4 May 2023, representatives from NHS and Keylan met with NPWS to discuss planning pathway for ongoing approval. ● Following this, on 15 May 2023, Keylan sent a letter to NPWS outlining the Part 5 pathway and request for NPWS written support on this. ● On 23 May 2023, NHS, Keylan met with officers from NPWS to discuss planning pathway for ongoing approval as well as other matters including future physical works. ● Representatives from NHS and Keylan have held multiple meetings with NPWS Officers to discuss planning process, as a Part 5 Application; NPWS verbally advised they agreed to this process; ● Representatives from NHS and Keylan have held multiple meetings with NPWS Officers to discuss the process and requirements for REF 	
DPHI Biodiversity and Conservation Division	<ul style="list-style-type: none"> ● On 28 March 2024, email correspondence was sent to a representative of the Biodiversity and Conservation Division to inform of the REF and offer the opportunity to comment or to meet. No email response has been received to date. ● On 12 April 2024, a phone call between Keylan and a representative of the Biodiversity and Conservation Division occurred in response to the above email. The representative acknowledged receipt of the email and outlined that their team is not usually involved in REFs, however, are available to assist with any process related questions associated with the preparation of the SIS if required. 	
Northern Beaches Council	<ul style="list-style-type: none"> ● On 28th February 2024, representatives from NHS and Keylan met with the Northern Beaches Council, Director of Planning. ● The overall vision for the site was presented and the REF for ongoing approval and general EP&A Act Part 5 process explained. 	

Consultation	Outcome, comments and recommendations	Ongoing communication
	<ul style="list-style-type: none"> No initial concerns were raised by Council during this meeting. On 23 April 2024, an email from Stantec (project traffic engineer) was sent to Councils Traffic Engineering Coordinator requesting Councils feedback from a traffic and transport perspective. . On 30 April 2024, Councils Traffic Engineering Coordinator responded, via email, advising Council has no significant issues or concerns. 	
Aboriginal Heritage Office	<ul style="list-style-type: none"> On 7 March 2024, representatives from AMBS Heritage and NHS met with the Cultural & Educational Officer, Aboriginal Heritage Office (AHO) to discuss the REF pathway and additional matters for the Aboriginal Heritage Assessment Report. The purpose of the due diligence and REF were outlined to AHO, who stressed the cultural significance of the area, and indicated her understanding and support for the continuation of current operations at the Quarantine Station. 	Continued consultation with the AHO will occur to ensure community values are incorporated in the future vision of the site as this is realised.
Heritage Council	<ul style="list-style-type: none"> On 8 May 2024, representatives from Keylan Consulting and Architectural Projects (heritage consultants) presented to the Heritage Council. The presentation included an overview of the existing framework, proposed scope and way forward Overall, the Heritage Council expressed general support for the proposal and the REF pathway process. 	Continued consultation with the Heritage Council will occur to ensure heritage values are incorporated in the future vision of the site.

8.3 Community and Other Stakeholder Consultation

As part of the engagement process, extensive consultation has been undertaken with the community and key stakeholders. A summary of consultation carried out with other groups is provided in the table below. Further detail of consultation, where relevant, is provided in subheadings below the table.

Individual/group consulted	Comments and recommendations	Ongoing communication
Adjacent landowners		
Neighbouring streets: <ul style="list-style-type: none"> • North Head scenic Drive • St Barbaras Avenue • Darley Road (until intersection with Addison Road) • 1 Addison Road to Stuart Street intersection • Stuart Street from Addison Road towards Collins Beach • Carey Street, Wood St, Marshall Street, Osbourne Road 	<ul style="list-style-type: none"> • On 5 March 2024, residents and landowners from the neighbouring streets were invited via letter box drop to a community meeting convened by NHS and Keylan at the site (14 March 2024) • Approximately 10 residents and landowners attended the community meeting. • A summary of the community meeting is provided at Section 8.4 below. 	Yes. There is an opportunity for members of the community to ask questions via a dedicated NPWS website for the REF.
Wider community/and or notification of works		
N/A	<ul style="list-style-type: none"> • The wider community will be notified by NPWS during the formal exhibition of the REF. During this time, the community will have the opportunity to make a formal submission. 	Yes. Once the REF is submitted and formally exhibited.
Interest groups and/or notification		
Les Sculptures Refuses	<ul style="list-style-type: none"> • Les Sculptures Refuses were invited to the community meeting held at the site on 14 March 2024. A member attended this meeting. A summary of this meeting is provided at Section 8.4 below. 	Yes. Opportunity for stakeholders to ask questions and/or provide further feedback via a

Individual/group consulted	Comments and recommendations	Ongoing communication
Quarantine Station Consultative Committee (QSCCC)	<ul style="list-style-type: none"> On 14 February 2024, the QSCCC were briefed on the proposed activity. Meeting minutes are provided at Appendix 9. The QSCCC were invited to the community meeting held at the site on 14 March 2024. At least one representative attended this meeting. Summary of the meeting is provided at Section 8.4 below. On 15 May 2024, representatives from NHS and Keylan attended the regular QSCCC meeting. A presentation / update was provided by Keylan to the members of the QSCCC. Meeting minutes are provided at Appendix 9. Several queries/questions from members of the QSCCC were addressed throughout the meeting with regard to publication of the REF, lapsing of the current approval, drafting conditions of approval and mode share targets. 	dedicated NPWS website for the REF. Yes. Opportunity for stakeholders ask questions and/or provide feedback via a dedicated NPWS website for the REF.as well as at the QSCCC meetings.
Manly Community Forum (MCF)	<ul style="list-style-type: none"> MCF were invited to the community meeting held at the site on 14 March 2024. At least one representative attended this meeting. A summary of this meeting is provided at Section 8.4 below. 	Yes. Opportunity for stakeholders to ask questions and/or provide further feedback via a dedicated NPWS website for the REF.
Friends of Quarantine Station	<ul style="list-style-type: none"> On 1 March 2024, a meeting was held with Friends of Quarantine Station. The overall vision for the site was presented and the REF for ongoing approval. Following this meeting, on 11 March 2024, Friends of Quarantine Station issued a letter outlining the key points the group would like to be addressed within the REF. A response to these points is provided in Section 8.4 below. The letter is also provided at Appendix 9. Friends of Quarantine Station were invited to the community meeting held at the site 14 March 2024. At least one representative attended this meeting. A summary of the meeting is provided at Section 8.4 below. 	Yes. Opportunity for stakeholders to ask questions and/or provide further feedback via a dedicated NPWS website for the REF.
Penny Sharpe, Minister of Environment and Heritage	<ul style="list-style-type: none"> A letter was sent to the Minister of Environment and Heritage to inform and invite comment on the proposed activity. A copy of this letter is included at Appendix 9. 	Yes. Ongoing discussions with the Minister are being

Individual/group consulted	Comments and recommendations	Ongoing communication
	<ul style="list-style-type: none"> Following this, on 8 March 2024, a meeting was convened with the Minister (representatives from Heritage NSW and NPWS also attended). The meeting was positive. One of the Minister's advisors mentioned the Minister would be open to a site visit. The Heritage advisor was also very engaged and interested in having further conversations and assisting where possible. 	held regarding a future site visit.
James Griffin, Local Member for Manly	<ul style="list-style-type: none"> The Local Member for Manly's office was contacted via email to inform and invite comment on the REF. Additionally, James Griffin's office was invited to the community meeting held 14 March 2024. A representative did not attend the meeting. 	Yes. Opportunity for stakeholders to ask questions and/or provide further feedback via a dedicated NPWS website for the REF.
North Head Sanctuary Foundation (NHSF)	<ul style="list-style-type: none"> At least one representative attended the community meeting held 14 March 2024. A summary of the meeting is provided at Section 8.4 below. At least one representative attended the stakeholders online meeting held 20 March 2024. No questions or issues were raised at this meeting. 	Yes. Opportunity for stakeholders to ask questions and/or provide further feedback via a dedicated NPWS website for the REF.
Sydney Harbour Federation Trust	<ul style="list-style-type: none"> At least one representative attended the community meeting held 14 March 2024. A summary of this meeting is provided at Section 8.4 below. At least one representative attended the stakeholders online meeting held 20 March 2024. No questions or issues were raised at this meeting. 	Yes. Opportunity for stakeholders to ask questions and/or provide further feedback via a dedicated NPWS website for the REF.
Federal Police College	<ul style="list-style-type: none"> Invited to community meeting held 14 March 2024 via email. A representative did not attend this meeting, however a response to the email invite was received confirmed there were no queries or concerns with the proposed REF. 	Yes. Opportunity for stakeholders to ask questions and/or provide further feedback via a dedicated NPWS website for the REF.

Individual/group consulted	Comments and recommendations	Ongoing communication
Sydney Water (includes North Head Wastewater Treatment Plant)	<ul style="list-style-type: none"> At least one representative attended the community meeting held 14 March 2024. A summary of this meeting is provided at Section 8.4 below. At least one representative attended the stakeholders online meeting held 20 March 2024. No questions or issues were raised at this meeting. 	Yes. Opportunity for stakeholders to ask questions and/or provide further feedback via a dedicated NPWS website for the REF.
Manly Warringah Pittwater Historical Society	<ul style="list-style-type: none"> At least one representative attended the community meeting held 14 March 2024. A summary of this meeting is provided at Section 8.4 below. 	Yes. Opportunity for stakeholders to ask questions and/or provide further feedback via a dedicated NPWS website for the REF.
International College of Management Sydney (ICMS)	<ul style="list-style-type: none"> At least one representative attended the stakeholders online meeting held 20 March 2024. No questions or issues were raised at this meeting. 	Yes. Opportunity for stakeholders to ask questions and/or provide further feedback via a dedicated NPWS website for the REF.

8.4 Further details of consultation

8.4.1 Summary of community meeting, dated 14 March 2024

Key question/theme	Response
<ul style="list-style-type: none"> <i>Where will it (Masterplan / REF) be advertised when ready for community consultation?</i> 	The REF submission will be formally exhibited by NPWS online. A Masterplan pertaining to future proposed works will be prepared at a future time; however, this process is separate to the REF and will be publicly exhibited at a later date, per NPWS advice.

Key question/theme	Response
<ul style="list-style-type: none"> • <i>Has Sydney Harbor Trust been involved as they have big plans up there?</i> 	<p>The Sydney Harbour Trust has been consulted as part of the preliminary consultation for the REF. Refer to Section 8.3.</p>
<ul style="list-style-type: none"> • <i>When will we see the Master Plan?</i> 	<p>The masterplan process is separate to the REF and will be publicly exhibited at a later date, per NPWS advice.</p>
<ul style="list-style-type: none"> • <i>Where will be the spa be?</i> 	<p>A Wellness Facility at the Hospital and Isolation Precinct is part of the future vision of the site and will be subject to a separate, future environmental impact assessment and application.</p>
<ul style="list-style-type: none"> • <i>Will Q Station get room service?</i> 	<p>Room service does not form a part of this REF and is part of the future vision of the site, subject to the relevant approval.</p>
<ul style="list-style-type: none"> • <i>Will there be e bikes or electric cars?</i> 	<p>The provision of e-bikes or electric cars do not form part of this REF. There are plans to electrify the shuttle bus fleet as well as introduce mini carts and electric bikes in future, subject to the relevant approval.</p>
<ul style="list-style-type: none"> • <i>Public access to Q Station feels forbidden. There are no footpaths, lots of cars driving around, hard to walk around, we do not feel like we are allowed to get on the shuttle as the sign says</i> 	<p>Improvements to public access do not form part of this REF. However, this is acknowledged by NHS and signage/wayfinding improvements are part of the broader vision for the site, subject to the relevant approval.</p> <p>No private cars are permitted on site to protect wildlife. The boom gate next to reception controls this. However, there are plans to make the shuttle more publicly available and known.</p>
<ul style="list-style-type: none"> • <i>Is the spa going to be open to the public? Will the spa create more traffic on Darly Road?</i> 	<p>The Wellness Facility is not proposed under this REF. No changes to the site capacity are proposed under this REF.</p> <p>However, it is noted, the Wellness Facility is proposed to be open to the public.</p>
<ul style="list-style-type: none"> • <i>Museum – I didn't know there was a museum, is this advertised anywhere?</i> 	<p>There are future plans to improve the museum and history offering.</p>
<ul style="list-style-type: none"> • <i>Does the ferry still come to Q Station?</i> 	<p>No. The ferry services ceased operation in 2020 due to lack of demand. It is anticipated the service will be reinstated once demand returns.</p>
<ul style="list-style-type: none"> • <i>Darley Road Community Group – Kandy Tagg said that group can speak with the Manly Community Forum to share any feedback and she can have it directed to QS / NPWS via the QSCCC</i> 	<p>Noted.</p>

Key question/theme	Response
<ul style="list-style-type: none"> • <i>Conditions of Consent – will these be available for review? Who will draft this?</i> 	The key proposed changes to current COPA are outlined in Section 4.1, NPWS will draft the conditions of approval as the Determining Authority. The conditions of approval will be publicly available, once finalised.
<ul style="list-style-type: none"> • <i>Are the current conditions available to see anywhere?</i> 	Yes, they are available on DPHI's website.
<ul style="list-style-type: none"> • <i>Will anything happen to the water reservoir?</i> 	There are no plans for the water reservoir at this stage.
<ul style="list-style-type: none"> • <i>Do you have plans for Solar?</i> 	Solar Panels are not proposed as part of this REF. It is noted, solar is part of the broader vision for the site and will be subject to a separate, future planning application.

Table 3: Summary of community meeting 14 March 2024

8.4.2 Response to Friends of Quarantine Station letter, dated 11 March 2024

Friends of Quarantine Station Comment/Requirement	Response
<ul style="list-style-type: none"> • <i>Address both the National Significance and State Significance of the site.</i> 	Refer to Section 7 of REF and Heritage Impact Statement.
<ul style="list-style-type: none"> • <i>Be cognizant that the Conditions of Approval needs to be relevant for 25 years.</i> 	The environmental impact assessment and supporting expert reports consider this. Ultimately, the time period of the approval is at NPWS' discretion.
<ul style="list-style-type: none"> • <i>For any conditions that will have a limited applicability set time frames and staging plan</i> 	Noted. For NPWS' consideration.
<ul style="list-style-type: none"> • <i>Include the reasons behind each condition to give substance and rationale to assist with correct interpretation.</i> 	The environmental impact assessment and supporting expert reports consider this. Ultimately, the wording of each condition is at NPWS' discretion.
<ul style="list-style-type: none"> • <i>Be robust enough to cater for potential changes of leaseholder</i> 	As noted, this REF seeks to rationalise the requirements of the planning approval in order to provide a streamlined, contemporary and more workable approval for both NHS and NPWS.

Friends of Quarantine Station Comment/Requirement	Response
<ul style="list-style-type: none"> Clearly define the separate roles and responsibilities of North Head Sydney and NPWS, given NPWS is no longer a co-proponent 	<p>As outlined in Section 2 of this REF, NHS are the proponent and NPWS are the determining authority.</p>
<ul style="list-style-type: none"> Address in particular potential “grey” areas of responsibility, such as protection of threatened flora and fauna and the maintenance of the water storage tank and weed control on Cannae Point 	<p>Noted. For NPWS’ consideration.</p>
<ul style="list-style-type: none"> Consider, where appropriate, using performance oriented conditions rather than quantitative conditions e.g. performance condition to increase ESBS, little penguin and bandicoot populations rather than using a predetermined defined numerical control. 	<p>Noted. For NPWS’ consideration.</p>
<ul style="list-style-type: none"> Be able to future proof conditions to accommodate changing technologies. e.g. future types of water access that may mitigate impacts on sea grass and improved e-Hive and interpretive technologies 	<p>Noted. For NPWS’ consideration.</p>
<ul style="list-style-type: none"> Address the priority of water access both for visitor experience benefits and to mitigate vehicular traffic 	<p>Matters relating to water access are addressed in the Traffic Impact Assessment (Appendix 3).</p>
<ul style="list-style-type: none"> Address impacts of vehicular traffic on the whole of Manly town centre and access roads, bearing in mind seasonal variations and special event road closures in Manly. 	<p>The proposal does not involve any physical works nor any increase to the approved site capacity limits, and subsequently does not result in any changes to vehicular traffic associated with the site. Therefore, with the proposed management measures and measures to reduce private vehicle usage, the traffic volumes associated with the subject site are envisaged to reduce in the foreseeable future.</p>
<ul style="list-style-type: none"> Consider the cumulative impacts of the whole of North Head for traffic and handling capacity 	<p>It is considered that with the implementation of these measures, the traffic volumes on Manly town centre and access roads and the cumulative impact of the whole of North Head for traffic and handling capacity will only improve.</p> <p>Matters relating to vehicular traffic are addressed further in the Traffic Impact Assessment (Appendix 3).</p>
<ul style="list-style-type: none"> Address equity of access and affordability for different demographics 	<p>Matters relating to access and affordability do not form part of this REF. These matters will be addressed throughout future applications, where relevant.</p>

Friends of Quarantine Station Comment/Requirement	Response
<ul style="list-style-type: none"> <i>Include the Environmental Education Centre and education opportunities for the site for example for school groups</i> 	<p>The environmental and cultural centre is listed in the current Key Site Activities, school groups attend educational programs.</p>
<ul style="list-style-type: none"> <i>Seek always to keep the Q Station open to the public, welcoming and inclusive in character, rather than exclusive and private.</i> 	<p>The site will remain open to the public and no changes to this are proposed. The broader vision is to improve the site offerings to increase visitor satisfaction and access.</p>

Table 4: Response to Friends of Quarantine Station letter

9 Consultation – Aboriginal communities

9.1 Targeted consultation

AMBS Heritage consulted with local Aboriginal Traditional Custodian, Dennis Foley, in 2021 and 2022 by phone, email and in person as part of the development of the Aboriginal Heritage Interpretation Strategy for the site.

Mr Foley discussed the cultural significance of the site and wider North Head area and indicated his support for the continuing operation of Quarantine Station.

More recently, NHS has engaged with Mr Foley to regarding the Conservation Works Programme for the site and received his endorsement on 4 March 2024.

On 7 March 2024, representatives from AMBS Heritage and NHS met with Karen Smith, the Cultural & Educational Officer with the AHO. At this meeting, the purpose of the due diligence and REF were outlined to Ms Smith, who stressed the cultural significance of the area, and indicated her understanding and support for the continuation of current operations at the Quarantine Station.

AMBS has sought to consult with the Metropolitan Local Aboriginal Land Council (LALC) for this due diligence assessment, however, at the time of writing this report, no response has been provided. Notwithstanding, consultation attempts with the Metro LALC are ongoing.

Additionally, NHS have been undertaking consultation with the AHO for development of themes and stories for inclusion in the visitor centre and museum.

9.2 Native title notification requirements

The land is not subject to an Indigenous land use agreement. There has not been a determination of native title applicable to the land nor is there a native title claim pending.

Native title has not been extinguished or it is unclear if it has been extinguished.

The activity does not have a high risk of adversely affecting native title (e.g. major infrastructure works, new buildings or granting of leases).

9.3 Parks under other joint management arrangements

No areas of joint management would be impacted as a result of the works proposed in this REF.

10 Environmental Impact assessment

10.1 Physical and chemical impacts

Is the proposed activity likely to...	Applicable?	Impact level	Reasons	Safeguards/mitigation measures
1. impact on soil quality or land stability?	<input type="checkbox"/>	Negligible	<p>No new physical works, changes to site capacity or the Key Site Activities are proposed as part of the REF. Current operations have been determined as satisfactory.</p> <p>Notwithstanding, there may be some minimal impacts as a result of the daily operations of the site (i.e. visitor access and movement). Importantly, the existing safeguards and mitigation measures in place, to minimise the impact of daily site operations, will continue to be followed as outlined in the relevant site wide plans for the site.</p>	<p>These mitigation and management measures include, but are not limited to:</p> <ul style="list-style-type: none"> • Visitor movement is limited to walking on designated pathways, • Vehicle movement is limited transportation via the shuttle bus and Q station, inducted staff and contractor vehicles on designated roadways • Mown areas are subject to ongoing grass cutting. Weeding and other gardening tasks are predominately carried out in the immediate garden beds adjacent to buildings or on the periphery of the mown areas. <p>In addition, measures outlined in the specialist reports attached to this REF will be adhered to.</p>
2. affect a waterbody, watercourse, wetland or natural drainage system – either physically or chemically (e.g. due to runoff or pollution)?	<input type="checkbox"/>	N/A	<p>No new physical works are proposed as part of the REF. Current operations incorporate measures to avoid contamination, erosion and sedimentation of the site and waterbodies anticipated to adversely impact a waterbody due to runoff.</p>	<p>Existing safeguards and mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site, which include (but are not limited to):</p> <ul style="list-style-type: none"> • Adequate staff training to reduce contaminated waste

Review of Environmental Factors: North Head Quarantine Station ongoing operation

Is the proposed activity likely to...	Applicable?	Impact level	Reasons	Safeguards/mitigation measures
				<ul style="list-style-type: none"> • Avoiding storing or handling of fuels and/or chemicals in vicinity of the watercourse • Bunding to contain liquid spills • Ensuring maintenance area is in an orderly and hygienic standard • Clean away dirt from drains • Replace any damaged systems <p>In addition, measures outlined in the specialist reports attached to this REF will be followed.</p>
3. change flood or tidal regimes, or be affected by flooding?	<input type="checkbox"/>	N/A	N/A	N/A
4. affect or be affected by coastal processes and coastal hazards, including those under climate change projections (e.g. sea level rise)?	<input type="checkbox"/>	N/A	N/A	N/A
5. involve the use, storage or transport of hazardous substances, or use or generate chemicals which may build up residues in the environment?	<input type="checkbox"/>	Negligible	<p>Waste at Q Station is classified in accordance with the Waste Classification Guidelines issued by the Environmental Protection Agency.</p> <p>Although there are no new physical works proposed as part of this activity (which would involve the use, storage or transport of substances), there may be</p>	<p>These mitigation and management measures include, but are not limited to:</p> <ul style="list-style-type: none"> • Batteries are recycled within a designated bin, kept at A24 maintenance • Sharp bins are available on site, for safe disposal of needles

Is the proposed activity likely to...	Applicable?	Impact level	Reasons	Safeguards/mitigation measures
			<p>some minimal impacts as a result of the daily operations of the site (i.e. waste from kitchen, office and cleaning operations). Importantly, the existing safeguards and mitigation measures in place, to minimise the impact of daily site operations, will continue to be followed as outlined in the relevant site wide plans for the site.</p>	<ul style="list-style-type: none"> • Toner cartridges are stored and collected at Building A1 • Paint and chemical waste are stored and collected from A24 maintenance shed.
<p>6. involve the generation or disposal of gaseous, liquid or solid wastes or emissions?</p>	<input type="checkbox"/>	<p>Negligible</p>	<p>Waste at Q Station is classified in accordance with the Waste Classification Guidelines issued by the Environmental Protection Agency.</p> <p>Although there are no new physical works proposed as part of this activity (which would involve the use, storage or transport of waste), there may be some minimal impacts as a result of the daily operations of the site. Importantly, the existing safeguards and mitigation measures in place, to minimise the impact of daily site operations, will continue to be followed as outlined in the relevant site wide plans for the site.</p>	<p>These mitigation and management measures include, but are not limited to:</p> <ul style="list-style-type: none"> • Grease taps are located at A20, P13 and Boilerhouse, which are regularly collected by Sydney Waste • Sewage is pumped to main sewer. If required additional capacity is taken out by service contractor.
<p>7. involve the emission of dust, odours, noise, vibration or radiation?</p>	<input type="checkbox"/>	<p>Negligible</p>	<p>No new physical works are proposed as part of the REF which would increase air and dust pollution.</p> <p>There may be some minimal noise impacts as a result of the daily operations of the site (i.e. patron noise, recreational activities). Importantly, the existing safeguards and mitigation measures in place, to minimise the impact of daily site</p>	<p>These mitigation and management measures include, but are not limited to:</p> <ul style="list-style-type: none"> • Configuring amplified music systems at the northern end of the venues, relevant to the Boilerhouse • Venue staff are responsible for maintaining noise levels during events responsible for controlling specified noise levels

Review of Environmental Factors: North Head Quarantine Station ongoing operation

Is the proposed activity likely to...	Applicable?	Impact level	Reasons	Safeguards/mitigation measures
			<p>operations, will continue to be followed as outlined in the relevant site wide plans for the site.</p> <p>These impacts are further detailed within the Noise Impact Assessment, prepared by AKA Acoustics (Appendix 5).</p>	<ul style="list-style-type: none"> • High capacity events should have windows and doors (where possible) closed again this specified Boilerhouse • Adhering to noise related conditions in the Liquor License

10.2 Biodiversity impacts

Is the proposed activity likely to...	Applicable? *	Impact level	Reasons	Safeguards/mitigation measures
<p>1. affect any declared area of outstanding biodiversity value or critical habitat or environmental asset of intergenerational significance?</p>	<p>☒</p>	<p>Low</p>	<p>As noted, the subject site contains an AOBV which was determined for the Manly little penguin population.</p> <p>The SIS provides an assessment against the key threatening processes for the Little Penguins. This is summarised below:</p> <p><i>The continuing poor results overall show that the little penguin breeding population has reduced considerably at Manly. The population has not been able to recover from the extensive losses to the breeding population from the fox predation in the pre-breeding season of June 2015.</i></p> <p><i>The current low level of the population means there is little buffer against other impacts such as changes in oceanic conditions, which could affect individual breeding seasons or the long-term population. The current low level of the population can especially not withstand another catastrophic predation event such as the fox predation in 2015.</i></p> <p><i>Past reporting has not indicated that Q Station's operation as a causal factor in the little penguin's breeding population decline, despite the absence of breeding proximal to the QS Beach and Boilerhouse Restaurant.</i></p>	<p>Existing safeguards and mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site. In addition, the SIS identifies a range of additional monitoring and mitigation measures to ensure a better understanding of disturbance impacts and provide additional protection for the little penguin habitat adjacent to the Boilerhouse Restaurant, including (but not limited to):</p> <ul style="list-style-type: none"> • <i>Review lighting within the Wharf Precinct to assess existing design parameters against current guidelines, standards and best practices</i> • <i>Installation of acoustic barriers to reduce noise to habitat areas and beach adjacent to the Boilerhouse Restaurant</i> • <i>In consultation with the NPWS little penguin recovery team, determine the most appropriate landscaping, artificial habitat creation and maintenance requirements that can be implemented at the QS Beach location adjacent the Boilerhouse Restaurant.</i> <p>Refer SIS at Appendix 2 for further detail.</p>

Is the proposed activity likely to...	Applicable? *	Impact level	Reasons	Safeguards/mitigation measures
			No new physical works, changes to site capacity or the Key Site Activities are proposed as part of the REF.	
2. result in the clearing or modification of vegetation, including ecological communities and plant community types of conservation significance?	<input type="checkbox"/>	N/A	No new physical works (including clearing or removal of vegetation), changes to site capacity or the Key Site Activities are proposed as part of the REF.	Existing safeguards and mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site. In addition, measures outlined in the specialist reports attached to this REF will be followed.
3. endanger, displace or disturb terrestrial or aquatic fauna, including fauna of conservation significance, or create a barrier to their movement?	<input checked="" type="checkbox"/>	Low	<p>The SIS identifies two threatened fauna populations occur within the subject site and surrounding environs:</p> <ul style="list-style-type: none"> • The endangered population of Little Penguins <i>Eudyptula minor</i> at Manly • The endangered Long-nosed bandicoot (<i>Perameles nasuta</i>) population at North Head <p>Additionally, the following threatened fauna species have been considered in the SIS:</p> <ul style="list-style-type: none"> • <i>Pseudophryne australis</i> (the red-crowned toadlet) – Vulnerable under the BC Act • <i>Cercartetus nanus</i> (eastern pygmy possum) – Vulnerable under the BC Act <p>Based on the information available at the time of preparing the SIS the following is concluded:</p> <ul style="list-style-type: none"> • <i>The proposed ongoing operation of Q Station will not result in significant impacts on</i> 	<p>Existing safeguards and mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site. In addition, the SIS identifies a range of additional monitoring and mitigation measures, including:</p> <ul style="list-style-type: none"> • Validation of the boundaries and condition of plant community types within the subject site to determine the extent and type of threatened ecological communities, guide how they should be managed, and understand whether diagnostic and condition thresholds are met to be considered nationally threatened. • Expand or update induction, ongoing training and records requirement for all employees and contractors working in habitat areas of threatened species, communities and populations. • Ongoing monitoring programs be expanded to include the red-crowned toadlet.

Is the proposed activity likely to...	Applicable? *	Impact level	Reasons	Safeguards/mitigation measures
			<p><i>biodiversity values within or proximal to the subject site.</i></p> <ul style="list-style-type: none"> • <i>There is insufficient site-specific data to determine whether past operation of the facility has caused either wholly in part the cessation of breeding in habitat at the QS Beach and Boilerhouse locality.</i> • <i>The risk of any potential impacts having a significant impact on biodiversity values (within the subject site or proximal to the subject site) appears due to external factors that are beyond the control of NHS (e.g., climate change, wave action from the busy harbour, unplanned bushfires, recreational visitors by watercraft to Spring Cove).</i> • <i>The potential for the proposal to result in any impacts on biodiversity values will be continually monitored and scrutinised through ongoing compliance auditing and where necessary adaptively managed.</i> <p>No new physical works, changes to site capacity or the Key Site Activities are proposed as part of the REF. Current operations have been determined as satisfactory.</p> <p>Refer SIS at Appendix 2 for further detail.</p>	<ul style="list-style-type: none"> • In consultation with the NPWS little penguin recovery team investigation options to re-introduce nest boxes at QS Beach for the little penguin. • Consult with NSW TfNSW (Maritime) to: <ul style="list-style-type: none"> ○ improve signage in Spring Cove and enforcement of speed limits and anchoring in no-anchor zones (noting that aerial photographic interpretation indicates multiple infringements) ○ undertake educational/information campaigns to commercial operators and private boat owners to reinforce the sensitivity of the Spring Cove environment <p>Refer SIS at Appendix 2 for further detail.</p>
<p>4. result in the removal of protected flora or plants or fungi of</p>	<input type="checkbox"/>	<p>N/A</p>	<p>No new physical works (including removal or clearing of vegetation), changes to site capacity or the Key Site Activities are proposed as part of the REF. Refer SIS at Appendix 2 for further detail.</p>	<p>Existing safeguards and mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site. In addition, measures outlined in</p>

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Is the proposed activity likely to...	Applicable? *	Impact level	Reasons	Safeguards/mitigation measures
conservation significance?				the specialist reports attached to this REF will be followed.
6. contribute to a key threatening process to biodiversity or ecological integrity?	<input checked="" type="checkbox"/>	Low	<p>The SIS provides detailed assessment against threatened flora and fauna populations present within the site.</p> <p>The SIS concludes that the proposed ongoing operation of Q Station will not result in significant impacts on biodiversity values within or proximal to the subject site.</p> <p>The risk of any potential impacts having a significant impact on biodiversity values (within the subject site or proximal to the subject site) appears due to external factors that are beyond the control of NHS (e.g., climate change, wave action from the busy harbour, unplanned bushfires, recreational visitors by watercraft to Spring Cove).</p> <p>Refer to SIS at Appendix 2 for further detail.</p>	Existing safeguards and mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site. In addition, measures are outlined in the SIS at Appendix 2 for further detail.
7. introduce weeds, pathogens, pest animals or genetically modified organisms into an area?	<input type="checkbox"/>	N/A	No new physical works, changes to site capacity or the Key Site Activities are proposed as part of the REF.	Existing safeguards and mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site. In addition, measures outlined in the specialist reports attached to this REF will be followed.

10.3 Community impacts

Is the proposed activity likely to...	Applicable? *	Impact level	Reasons	Safeguards/mitigation measures
1. affect community services or infrastructure?	<input checked="" type="checkbox"/>	Positive	<p>The proposed activity will ensure the ongoing operation of and community access/use to the site as a key piece of social infrastructure with a high community value.</p> <p>The ongoing operation will assist in protecting the heritage values of the site and buildings.</p>	<p>Existing safeguards and mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site. In addition, measures outlined in the specialist reports attached to this REF will be followed.</p> <p>Operations such as regular inspections of buildings, open space and infrastructure inform if maintenance is required, such as painting of buildings, clearing of drains, repairing of potholes etc. This in turn has positive impacts, ensuring the conservation of heritage buildings and the site generally.</p>
2. affect sites important to the local or broader community for their recreational or other values or access to these sites?	<input checked="" type="checkbox"/>	Positive	As above.	As above.
3. affect economic factors, including employment, industry and property value?	<input checked="" type="checkbox"/>	Positive	<p>The proposed ongoing operation of the site will allow it to continue to provide jobs and contribute to the local and national economy as a popular tourist attraction.</p> <p>As a business, Q Station employs 140 staff most of whom live locally and provides business for other local contractors and suppliers. For the local and wider community, it has grown in recognition as a special place to connect with either through its now</p>	As above.

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Is the proposed activity likely to...	Applicable? *	Impact level	Reasons	Safeguards/mitigation measures
			well-established public visitor access or as a destination for accommodation, tours or events.	
4. have an impact on the safety of the community?	<input checked="" type="checkbox"/>	Negligible	Community safety will continue to be managed in accordance with the current site operations (as outlined in the relevant site wide plans).	<p>These measures include (but are not limited to):</p> <ul style="list-style-type: none"> • Controlled access to the site • Implementation of speed limits • Secure locking system • Alarm system • Security cameras
5. cause a bushfire risk?	<input checked="" type="checkbox"/>	Negligible	<p>The use of and visitation to the site is not proposed to intensify. Nonetheless, a Bushfire Assessment has been undertaken for the REF to confirm impacts. This report is provided Appendix 8.</p> <p>The review concluded that the operational bushfire management arrangements at Q Station are adequate and acceptable within the set bushfire management framework. The strategies have been developed based on bushfire risk, vulnerability, and significant site constraints.</p>	<p>There are two site-specific bushfire management planning documents that apply to Q Station. These are:</p> <ul style="list-style-type: none"> • 'The North Head Precinct Fire Management Strategy 2009-2014' (DEC 2009), referred to as the Fire Management Strategy. • 'North Head Quarantine Station Environmental & Heritage Site Wide Management Plan 2023: Appendix 17 Draft Emergency and Evacuation Plan' (NPWS 2023), referred to as the Emergency and Evacuation Plan. <p>This fire management planning structure has been created and adopted to address bushfire risk for existing buildings and delivers an appropriate bushfire management framework for Q Station.</p>
6. affect the visual or scenic landscape? ^	<input type="checkbox"/>	Positive	As noted, the site is a significant cultural and environmental landmark and is largely considered to form the visual landscape.	Existing mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site. In addition, measures outlined in the specialist reports attached to this REF will be followed.

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Is the proposed activity likely to...	Applicable? *	Impact level	Reasons	Safeguards/mitigation measures
			<p>As noted, no new physical works are proposed as part of the REF. The ongoing operation of the site will continue to provide regular maintenance and management of the site, having positive implications for the overall visual landscape.</p>	

10.4 Natural resource impacts

Is the proposed activity likely to...	Applicable? *	Impact level	Reasons	Safeguards/mitigation measures
1. result in the degradation of the park or any other area reserved for conservation purposes?	<input checked="" type="checkbox"/>	Negligible and positive	<p>No new physical works are proposed, and the use of water and energy at the site will continue to be managed in accordance with the current site operations (as outlined in the relevant site wide plans).</p> <p>In fact, an objective of the proposed ongoing operation of the site is to maintain and conserve the ecological and historical significance of the site. Operations such as regular inspections of buildings, open space and infrastructure inform if maintenance is required, such as painting of buildings, clearing of drains, repairing of potholes etc. This in turn has positive impacts, reducing any likelihood of degradation.</p>	Importantly, the existing safeguards and mitigation measures in place, to minimise the impact of daily site operations, will continue to be followed as outlined in the relevant site wide plans for the site.
2. affect the use of, or the community's ability to use, natural resources?	<input checked="" type="checkbox"/>	Positive	The proposed activity will ensure the ongoing operation of, and community access/use to the site as a key natural resource.	As above.
3. involve the use, wastage, destruction or depletion of natural resources including water, fuels, timber or extractive materials? ^	<input type="checkbox"/>	N/A	<p>No physical works, changes to site capacity or the Key Site Activities are proposed as part of the REF. Current operations have been determined as satisfactory.</p> <p>Although there will be general waste associated with the daily operations of the site, this waste is</p>	As above.

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Is the proposed activity likely to...	Applicable? *	Impact level	Reasons	Safeguards/mitigation measures
			not anticipated to comprise the destruction or depletion of natural resources.	
4. provide for the sustainable and efficient use of water and energy? †	<input checked="" type="checkbox"/>	Negligible	<p>No new physical works are proposed, and the use of water and energy at the site will continue to be managed in accordance with the current site operations (as outlined in the relevant site wide plans).</p> <p>Notwithstanding, an ESD report prepared by Credwell Energy has been prepared for the REF and is provided at Appendix 7.</p>	<p>To keep the site in-line with future sustainability trends the following ESD mitigation measures are proposed to be incorporated at the site:</p> <ul style="list-style-type: none"> • The consideration of electric vehicle infrastructure for visitors • Addition of solar panels to offset operational energy, subject to approval • Introduction of organic waste recycling • Policy for use of low TVOC paint, sealants, adhesives etc • Future building materials to be recycled or have a sustainable certification (GECA, EPD, GreenGlobalTag etc) • Climate resilience risk assessment to identify the impact of bush fires/heatwaves/flooding etc on site

10.5 Aboriginal cultural heritage impacts

Is the proposed activity likely to...	Applicable? *	Impact level	Reasons	Safeguards/mitigation measures
1. disturb the ground surface or any vegetation likely to contain culturally modified trees?	<input type="checkbox"/>	N/A	<p>No physical works, changes to site capacity or the Key Site Activities are proposed as part of the REF.</p> <p>The Aboriginal Due Diligence Assessment prepared by AMBS Ecology and Heritage has confirmed, the activity, including ongoing operations will not disturb the ground surface.</p>	Existing safeguards and mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site. In addition, measures outlined in the specialist reports attached to this REF will be followed.
<p>2. affect or occur near known Aboriginal objects, Aboriginal places or an Aboriginal cultural asset of intergenerational significance?</p> <p>If so, can impacts be avoided? How?</p>	<input checked="" type="checkbox"/>	Negligible	<p>There are no declared Aboriginal Places within the site. Notwithstanding, the “Guringai Resting Place – Quarantine Station” is listed on the SHR as a culturally sensitive site, located within the Sydney Harbour National Park, adjacent to the site. The exact location of which is restricted at the request of the Aboriginal Community. It contains the ancestral remains of Aboriginal people and evidence of past Aboriginal occupation including campsites and rock engravings.</p> <p>There are also several AHIMS sites located in the local area, 12 previously recorded within site itself. Further details are provided in the Aboriginal Heritage Due Diligence report at Appendix 6.</p> <p>Aboriginal Heritage Due Diligence Assessment confirms there are no expected implications on these sites as a result of the proposed activity.</p>	Existing safeguards and mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site. In addition, measures outlined in the specialist reports attached to this REF will be followed. Refer to the recommendations in the Aboriginal Heritage Due Diligence Assessment at Appendix 6.
<p>3. affect areas:</p> <ul style="list-style-type: none"> - within 200 m of waters - within a sand dune system 	<input checked="" type="checkbox"/>	Negligible	The site is located within 200m of water, sand dunes, ridge tops, cliff faces and rock shelters.	Existing safeguards and mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site

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Is the proposed activity likely to...	Applicable? *	Impact level	Reasons	Safeguards/mitigation measures
<ul style="list-style-type: none"> - on a ridge top, ridge line or headland - within 200 m below or above a cliff face - in or within 20 m of a cave, rock shelter or a cave mouth? <p>If so, can impacts be avoided? How?</p>			<p>Notwithstanding, the proposed activity involves no physical works or intensification of the use of the site (through no changes to site capacity). On this basis, no impacts on these areas are expected.</p>	
<p>4. affect wild resources which are used or valued by the Aboriginal community or affect access to these resources?</p>	<input checked="" type="checkbox"/>	<p>Negligible</p>	<p>The proposed activity involves no physical works or intensification of the use of the site (through no changes to site capacity). On this basis, no impacts on wild resources, used or valued by the Aboriginal community, are expected. Access to these resources is also not expected to change.</p>	<p>Existing safeguards and mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site</p>
<p>5. affect access to culturally important locations?</p>	<input checked="" type="checkbox"/>	<p>Positive</p>	<p>The proposed activity will ensure the ongoing operation of and community access to the site as a culturally important location.</p>	<p>Existing safeguards and mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site</p>

10.6 Other cultural heritage impacts

Is the proposed activity likely to...	Applicable? *	Impact level	Reasons	Safeguards/mitigation measures
1. affect or occur near places, buildings or landscapes of heritage significance? ^	☒	Negligible adverse impacts, positive impacts	A HIS prepared by Architectural Projects (Appendix 4). The HIS confirms the ongoing operations will have a low impact on the places, buildings and landscapes of the site, as the operations are proposed to occur in the context of the site wide plans, which are developed to protect the identified cultural heritage values in response to the original conditions of planning approval.	Existing safeguards and mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site. In addition, measures outlined in the specialist reports attached to this REF will be followed. Refer to the HIS at Appendix 4 for further information.
2. impact on relics or moveable heritage items, or an area with a high likelihood of containing relics? ^	☒	Negligible adverse impacts, positive impacts	The HIS concludes that the continued operation of the site will be acceptable from a heritage perspective due to the strong heritage management framework which governs the use of the site.	As above.
3. impact on vegetation of cultural landscape value (e.g. gardens and settings, introduced exotic species, or evidence of broader remnant land uses)?	☒	Negligible	<p>The site includes vegetation of cultural landscape value however the proposed activity involves no physical works or intensification of the use of the site (though no changes to site capacity).</p> <p>No gardening activities are proposed for areas of natural vegetation around the site and will be restricted to previously established and maintained mown areas and garden beds.</p>	As above.

10.7 Impacts on matters of national environmental significance

Is the proposal likely to affect MNES, including:	Applicable? *	Likely impact	Reasons	Safeguards/mitigation measures
1. listed threatened species or ecological communities)?	<input checked="" type="checkbox"/>	Negligible	No new physical works, changes to site capacity or the Key Site Activities are proposed as part of the REF. Current operations have been determined as satisfactory. Refer Section 6.4 of this REF.	Existing safeguards and mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site. In addition, measures outlined in the specialist reports attached to this REF will be followed Refer to SIS at Appendix 2.
2. listed migratory species?	<input type="checkbox"/>	N/A	N/A	N/A
3. the ecology of Ramsar wetlands?	<input type="checkbox"/>	N/A	N/A	N/A
4. world heritage values of World Heritage properties?	<input type="checkbox"/>	N/A	N/A	N/A
5. the national heritage values of national heritage places?	<input checked="" type="checkbox"/>	Negligible	No physical works, changes to site capacity or the Key Site Activities are proposed as part of the REF. As discussed in Section 6.4 of this REF, the ongoing operation of the site will continue to safeguard and protect the National Heritage values of the site, in accordance with the relevant site wide plans.	Existing safeguards and mitigation measures will continue to be followed as outlined in the relevant site wide plans for the site. In addition, measures outlined in the specialist reports attached to this REF will be followed refer to SIS at Appendix 2 and HIS at Appendix 4.

10.8 Any other relevant environmental factors

10.8.1 Traffic impacts

Overview

On 25 May 2018, approval was granted for Q Station to increase the maximum visitation capacity to 600 people for up to 20 events per year (08_0041-Mod-3). As part of this approval, a new condition was added to the COPA which required a Site Travel and Access Plan (STAP) to be prepared prior to any larger events taking place. Accordingly, a STAP was prepared by Stantec and subsequently approved by the then Department of Planning and Environment on 14 September 2018. The 2018 STAP identified a range of management measures for five different event types and sizes at the site.

To support this REF, a new STAP has been prepared by Stantec. This report is provided at Appendix 3 and addresses the following traffic and access related matters:

- a review of the current site operations to determine whether the operations are adequate to continue from a traffic and access perspective
- a range of management measures to ensure that the ongoing operation of the site is acceptable from a traffic and access perspective (building on the approved 2018 STAP)
- proposed changes to the COPA

Traffic generation

The proposed activity does not involve any new physical works nor any increase to the approved site visitor capacity limits. On this basis, no changes to vehicular traffic associated with the site are anticipated. Further, no additional traffic (beyond existing) is expected to be generated within the Manly Town Centre or access roads, including Darley Road.

Mode share

The proposed STAP is based on the approved 2018 STAP and no changes to the mode share targets for the different event types are proposed as part of this REF, with the exception of water-based access mode share – noting, this will remain within the approved total visitor capacity limits.

The STAP found that while Condition 139 currently requires all practical measures to ensure that 40% to 50% of visitors access the site by ferry, this represents a significant and unrealistic mode shift from existing travel behaviours. The existing and proposed STAP outlines that a lower, but still considerable mode share of 25% should be adopted for future travel to and from the site. Further, the proposed STAP outlines that the 25% should include other water-based modes of travel such as recreational vessels, kayaks and canoes, in addition to the currently approved ferry.

Recreational vessels are only proposed that are of a similar size and type to the currently approved ferry (the Jenner – refer Condition 140) and it is understood a separate approval for larger vessels would be required (refer Condition 141). The ecological impacts of this change are assessed in the SIS and Acoustic Reports at Appendix 2 and 5, respectively. It is important to note that no change to the car mode share target of 50% is proposed for the maximum visitor capacity targets (an Open Day event) in accordance with Condition 143.

Furthermore, the mode share targets described above reflect a maximum visitor capacity scenario (an Open Day event of 600 persons). The STAP provides mode share targets for five different event types which all differ due to the various anticipated requirements and nature of each event. These varying mode share targets are in accordance with the approved STAP (2018), with the exception of the change to the ferry mode share target which now includes other water-based modes of travel (recreational vessels, kayaks, canoes).

General access and transport management measures

To adequately manage the arrival and departure of visitors to Q Station, particularly for large events, the implementation of transport management measures is required to minimise the impact of pedestrians, traffic and parking on the surrounding area.

It is noted that barriers have previously been installed and maintained at the following locations to manage visitor access to and within the site:

- Beach fence with two access gates
- Wooden fence alongside restaurant (A6) terrace
- Access to southern side of wharf/Cannae Point
- Barriers in front of Wharf precinct inscriptions
- Wharf gates to restrict access to the beach and wharf between sunset and sunrise (when the gates are locked).

These management measures will be maintained and will ensure that the ongoing operation of the site from a traffic and transport perspective is adequate.

Carparking supply

Condition 151 of the existing approval permits the upper and lower car parks to provide up to 120 and 56 spaces respectively. In addition to this, Condition 152 of the existing approval permits provision of overflow parking for up to six approved special events per year. No changes are proposed to these numbers and parking will continue to be managed in addition to the proposed management measures in the STAP.

Cottage car parking

It is noted that under Condition 149 private vehicle usage is not currently approved on-site. This application seeks approval for this to occur under specific circumstances and with appropriate measures in place to allow safe vehicle movement and parking within the site. The current operation of the site includes the limited provision of on-site car parking for visitors to the cottages within 9 designated spaces in total), and it is proposed that this aspect of operations is retained and approved for the ongoing use of the site.

The following measures are currently in place and will continue to be implemented to ensure safe vehicle movements within the site, including those associated with cottage car parking:

- Upon checking in, guests utilising the cottage car parking facilities/space will be inducted to the site, with an overview of the site protocols including speed limit restrictions explained. A map and directions will also be provided to guests.
- An identification paper/permit will be given to the guests to place on their vehicle dashboard, which is to remain in place until exiting the site.
- Guests are to park their vehicle in the designated spot.
- Guests must not travel beyond the dedicated path outlined.

No other independent driving is permitted on-site by visitors to increase safety and protect wildlife, and as such, a shuttle bus is available at reception to transport visitors (inclusive of mobility-impaired guests/visitors) to various locations within the Q Station Precinct. The shuttle bus will continue to operate as part of ongoing site operations.

Boom Gates and Paid Parking

The upper car park does not currently have any parking restrictions in place to discourage people from parking and walking to surrounding tourist attractions. The STAP proposes that boom gates be installed on the upper car park and a paid parking scheme implemented to minimise the demand for this car park by visitors to surrounding sites and attractions.

Signage

In the event that, the upper car park is full, it is recommended that a temporary sign be placed at the existing welcome sign at the North Head Scenic Drive roundabout advising drivers accordingly. This would allow drivers to perform a U-Turn to head back towards Manly where they could catch a bus to the site, or to continue further along North Head Scenic Drive to other paid car parks. This is expected to only occur during larger events.

Staff Parking

Similar to the existing arrangement, Q Station will encourage staff for large events to car-pool, use public transport and/or ride share when travelling to and from the site. Staff will also be encouraged to use the Q Station Manly Shuttle to access other services to/from Manly.

Wharf

A ferry service commenced operation soon after Mawland Quarantine Station Pty Limited became lessee of the site. The service struggled to attract visitors to the site, however continued spasmodically until the first Covid lock down in 2020. It has not recommenced, principally due to the reluctance of ferry operators to include Q Station in their schedules (as indicated by costs they have proposed for a service connection), and low visitor demand evidenced by past usage patterns.

NHS plans to revitalise visitor activities in the Wharf Precinct in the future. It envisages that the proximity of the Wharf to these proposed interpretative experiences will incentivise visitors to access the site by water as part of this experience. This forecast demand would contribute to the economic viability of future ferry service returning to Q Station.

Any works required to the Quarantine Wharf be the subject of a separate REF.

NHS is committed to water-based access to the site.

With reference to Condition 138, it is recommended that any future ferry service shall:

- Be able to be reactivated in accordance with visitor demand. As stated, redevelopment works do not form part of this REF and works may be sought via a future separate planning pathway.
- Operate between the hours of 9am and 11pm, subject to consultation with ferry operators.
- Be limited to a maximum of one movement per hour, after sunset, between July and February inclusive, to reduce the potential for impacts on the Little Penguin population. A maximum of 20 movements in one day may occur at other times to encourage water-based access to the site, subject to consultation with ferry operators.
- With the exception of extreme weather events and maintenance periods, be provided on an hourly basis during the peak periods of visitor activity, subject to consultation with ferry operators.

Summary

The STAP concludes the following:

Implementation of this plan and associated transport management measures is expected to satisfactorily address the relevant consent conditions and minimise the impact of traffic and parking on the surrounding area.

The plan should be implemented by Q Station management, with boom gate and paid parking data recorded after each specified event, along with the number of vehicles turned away at the entrance (if any) if the car parks are full. Data would be reviewed quarterly, with any issues actioned accordingly and the Site Transport and Access Plan (STAP) updated.

On the basis that the recommended management measures are implemented, it is expected that the site will continue to operate satisfactorily from a traffic and transport perspective beyond 23 December 2024.

The recommended mitigation measures are outlined in the STAP (Appendix 3).

10.8.2 Acoustic impacts

A Noise Impact Assessment has been prepared by AKA Acoustics. The assessment identifies areas where noise impacts can be effectively managed in alignment with ecological sensitivities and community expectations. The assessment confirms adherence to existing regulatory standards and highlights specific areas where improvements are critical for long-term sustainability and compliance.

The Noise Impact Assessment identifies typical noise-generating activities from the site include, but are not limited to;

- Arrival and departure by road and sea.
- General operational noise (transportation, logistics, maintenance).
- Patron noise, events, and recreational activities.
- Amplified music or entertainment.
- Mechanical services (Heating, Ventilation, and Air Conditioning, exhaust and extraction fans).

The assessment reviews the noise generated from various above operational activities and events. Most activities comply with legislative noise regulations; however, outdoor events associated with the Boilerhouse are identified as potential sources of noise pollution. Implementing strict controls during these events, coupled with a robust real-time noise monitoring system, will allow the site to effectively self-mitigate these concerns.

Given this, AKA Acoustics recommends the following mitigation strategies relevant to the Boilerhouse;

- *All outdoor amplified music systems (both portable Bluetooth PA's, and large-format systems for live entertainment) should be configured at the northern-end of the venue. All loudspeakers (including foldback) should be aimed away from the northern boundary. This will ensure that noise emissions do not directly propagate towards the critical area at the northern/eastern boundary fence.*
- *Venue staff are responsible for maintaining noise levels during live events. A Class 1/Class 2 handheld Sound Level Meter should be employed during setup/soundcheck to ensure that the system output levels do not exceed 50dBA at the critical boundaries. In the case that the ambient noise level is higher than 50dBA (caused by other extraneous noise sources) then it is crucial that any amplified music is not measurably audible above this level.*
- *Amplified dining music emitted from consumer level equipment (such as Bluetooth PA's) should be completely inaudible, or barely audible, at any point along the existing fence line.*
- *All permanent hardware systems must be controlled by a noise limiter to ensure that maximum noise emissions (under operational conditions) do not exceed 50dBA. Limiter controls (including thresholds and maximum output Sound Power Levels) should only be accessible by a qualified acoustic consultant.*
- *During high-capacity events, all operable windows and doors should remain closed.*
- *Interior noise levels which exceed safe hearing levels are in no way supported or condoned.*
- *Notwithstanding the conditions above, the venues must adhere to the noise-related conditions outlined in the Liquor License (No. LIQO624015664).*

In addition to the above, the Noise Impact Assessment provides an overview of the management and conditions in place to minimise noise impacts on noise-sensitive fauna (i.e. the Little Penguin, Long-nosed Bandicoot and some native Bird species).

In light of the findings from the Species Impact Statement and other ecological assessments, the Noise Impact Assessment ultimately concurs with the recommendations, specifically:

- *Installation of acoustic barriers to reduce noise to habitat areas and beach adjacent to the Boilerhouse Restaurant. Noting that opaque noise barriers such as glass or perspex can be used to maintain water views to the beach*

The implementation of these recommendations will position Q Station as a model of sustainable operation, harmonising its historic significance with its commitment to environmental stewardship and community welfare.

10.8.3 Flora and Fauna

A Flora and Fauna Assessment (FFA) has been prepared by Ecologique (Appendix 1). The FFA describes the existing environment and the potential impacts upon native vegetation, threatened species, populations and ecological communities as relevant to the ongoing operation of the facility.

The FFA notes there are a number of threatened communities, populations and species that are found within the subject site. An overview of the FFA findings is outlined below:

Threatened Ecological Communities

The ongoing operation of Q Station is not anticipated to directly impact on any of the TECs mapped within the subject site. No clearing of vegetation is proposed. Potential clearing required for maintenance of Asset Protection Zones (APZs) will be subject to a separate approval process to be led by NPWS.

Threatened Populations

Little Penguin

As noted within this REF, as the proposed ongoing operation of the facility is located in an area of AOBV, the requirement to prepare an SIS is triggered and Manly's little penguins are the main focus of the proposal's SIS. The endangered population of Little Penguins *Eudyptula minor* at Manly is assessed in further detail in the SIS and Section 10 of this REF.

Long-nosed Bandicoots

Currently, the main impact on long-nosed bandicoots at North Head, including the QS lease area, is fatalities by vehicle strike. Road mortalities have been monitored by way of incidental records, including by the public and register maintained by the AWC and NPWS.

Mortalities have not exceeded the minimum Trigger level 2 (in accordance with existing operational consent). Notwithstanding, the long-nosed bandicoot population at North Head has been assessed and is discussed in further detail in the proposals SIS and Section 10 of this REF.

Threatened Species

Posidonia australis

The aquatic zone will not be directly impacted by the ongoing operation of the facility as no works are proposed in this zone, and water vessel transport is not currently in operation. The *Posidonia australis* is assessed in further detail in the SIS and Section 10 of this REF.

Whites Seahorse

White's Seahorse was listed as endangered under the FM Act in July 2019 and therefore has not been considered previously in assessments, COPAs or monitoring programs associated with the facility.

Surveys undertaken in January and February 2023 by MPR found that for the most part, the sub-tidal reefs in the study area form a single kelp bed zone, and while quite dense are most likely too shallow to support Whites seahorse - and none were located during specific searches.

Threatened Flora Species

Sunshine Wattle

The Q Station Monitoring Report 2018-2019 – updated (SNC-Lavalin, 2022) identified unauthorised vegetation clearing, which was addressed through 'vegetation identification and clearing' refresher training provided to landscape contractors approximately every three months via toolbox talks, which commenced in mid-2018.

Since this time, the new QS management (from 2022) are actively working to protect Sunshine Wattle and have participated in flagging all plants to assist with ongoing site management (NPWS 2017-2022).

Given the nature of past impacts to the species, the ongoing conservation of the species (within the subject site) should be subject to more stringent controls such as updated training for staff and contractors. The Sunshine wattle is assessed in further detail in the proposal's SIS and Section 10 of this REF.

Camfield's Stringybark

The proposed ongoing operation of the site is not anticipated to directly or indirectly impact on this species, providing visitor management and staff training is managed accordingly.

Threatened terrestrial fauna species

Red-crowned toadlet

The ongoing operation of the facility is considered unlikely to adversely affect the red-crowned toadlet. Potential habitat for the species will not be subject to any changes in operational activities.

Key impacts on potential habitat for this species would be altered hydrology and activities that decrease water quality. The subject site's hydrology will remain unchanged as will any activities that have the risk to impact on water quality.

Notwithstanding, the species is considered further in the SIS and Section 10 of this REF.

Pygmy Possum

The eastern pygmy possum was initially considered unlikely to be adversely affected by the proposed ongoing operation of the facility. This is largely due to the species having been introduced to the environment after operation of the facility had commenced. The pygmy possums introduced to nest boxes within or close to the subject site are anticipated to have adapted to any potential indirect impacts (e.g. light, noise) from the facility's operation.

However, during the preparation of this SIS a mother and young were killed in a vehicle strike within the QS lease area on the Entrance Road.

Consequently, the eastern pygmy possum has been included in the SIS and Section 10 of this REF.

10.9 Applicable Local Strategic Planning Statements, Regional Strategic Plans or District Plans

The strategic plans prepared under Division 3.1 of the EP&A Act relevant to the proposed activity and the site include:

- *Greater Sydney Regional Plan*
- *North District Plan*
- *Northern Beaches Local Strategic Planning Statement (LSPS)*

The proposed activity aligns with the above strategic documents for the reasons outlined below.

Region Plan and North District Plan

The *Greater Sydney Regional Plan* (Region Plan) and *North District Plan* outline how Greater Sydney and the Northern District (which includes the Northern Beaches LGA) will manage growth and change in the context of social, economic and environmental matters.

The proposed activity is consistent with the following objectives of the Region Plan as it will ensure the continuation of the site as a tourist and recreational asset, whilst maintaining and considering the environmental and heritage significance of the site:

- *Objective 8 – Greater Sydney’s communities are culturally rich with diverse neighbourhoods*
- *Objective 23 – Great places that bring people together*
- *Objective 13 – Environmental heritage is identified, conserved and enhanced*
- *Objective 25 – The coast and waterways are protected and healthier*
- *Objective 27 – Biodiversity is protected, urban bushland and remnant vegetation is enhanced*
- *Objective 28 – Scenic and cultural landscapes are protected*
- *Objective 31 – Public open space is accessible, protected and enhanced*
- *Objective 36 – People and places adapt to climate change and future shocks and stresses*

Northern Beaches LSPS

On 26 March 2020, the Northern Beaches Local Strategic Planning Statement (LSPS) came into effect. The LSPS is a 20-year plan which sets out Council’s land use vision and planning priorities for the LGA.

The proposal is consistent with the LSPS, in particular the following priorities:

Priority 2 – Protected and enhanced bushland and biodiversity

The proposed works will not result in adverse effects on flora and fauna, or habitats, at the site.

The SIS at Appendix 2 and Aboriginal Heritage DD Assessment at Appendix 6 provides detailed studies and analysis which are outlined and assessed throughout this report.

Priority 3 – Protected scenic and cultural landscapes

The proposed works will not result in adverse effects to heritage or cultural areas at the site. The proposed activity will secure ongoing operation of the site, therefore allowing access and interpretation to continue.

The HIA and Aboriginal Heritage DD Assessment provides detailed studies and analysis which are outlined and assessed throughout this report.

Priority 29 – A thriving, sustainable tourism economy

Quarantine Station is identified as a tourist attraction in the LSPS. The proposed activity aligns with this priority, ensuring the continued operation of the site, as well as diversifying tourism offering in the LGA, by improving and building on the site’s operation.

10.10 Consistency with NPWS policy

The REF is consistent with the relevant NPWS policies outlined in the table below:

Policy name	How proposal is consistent
People and wildlife policy	The proposed activity does not seek to increase the visitor capacity at the site, nor does it seek to encourage increased interaction between visitors and wildlife. Biodiversity impacts have been assessed as part of the SIS at Appendix 2. The findings and outcomes are outlined throughout this REF.
Property access policy	The proposed activity does not seek to change how the property is currently accessed. Current access will be maintained.

Visitor safety policy

Visitor safety will continue to be considered throughout the operation and function of the site as outlined in the operational and site wide plans.

Accessible parks policy

Access to the site and areas and buildings within the site will be maintained. No physical works are proposed.

Events, functions and venues policy

The site will continue to hold events and operate in accordance with NPWS policy and the relevant operational and site wide plans. The current site capacity is not proposed to change, nor are the approved Key Site Activities. Further, the use of the site will not be intensified.

10.11 Cumulative impacts

No new physical works are proposed as part of the REF.

It is important to note, the impacts correlating to the ongoing operations are considered very minor and are outweighed by the positive impacts of the operation of the site, including providing ongoing public access and ongoing maintenance and management of the heritage buildings and site.

On this basis, the proposed activity will not result in any cumulative impacts.

11 Proposals requiring additional information

11.1 Lease or licence proposals under s151 National Parks and Wildlife Act

Under NPWS policy, activities where NPWS is the proponent for projects of the kind listed in Section 151A of the NPW Act, proponents must complete and submit a sustainability assessment together with the REF.

Sustainability has been assessed throughout this REF as well as part of the associated documents.

Notwithstanding, the proposed activity does not seek a new lease or license in accordance with Section 151A of the NPW Act and does not warrant a separate sustainability assessment.

Further, no changes are proposed to the existing, approved use of the site for cultural tourism purposes, nor is a reduction in the level of public access to and use of the site or site capacity proposed.

Future works will be subject to separate applications and subsequent sustainability assessments.

11.2 Activities within regulated catchments

The proposed activity is subject to the provisions of Chapter 6 of the Biodiversity and Conservation SEPP as it is located within the Sydney Drinking Water Catchment.

11.2.1 All regulated catchments

The following factors require consideration.

Factors	Response
Water quality and quantity	
(a) will the proposal have a neutral or beneficial effect on the quality of water entering a waterway?	Neutral. No changes to site operations or capacity limits are proposed under the REF. Current water management measures will remain in place as per the relevant site wide plans.
(b) will the proposal have an adverse impact on water flow in a natural waterbody?	No. No changes to site operations or capacity limits are proposed under the REF and therefore no changes to water flow are anticipated. Current environmental management measures will remain in place as per the relevant site wide plans.
(c) will the proposal increase the amount of stormwater runoff from a site?	
(d) will the proposal incorporate on-site stormwater retention, infiltration or reuse?	
(e) what is the impact of the proposal on the level and quality of the water table?	Neutral. No changes to site operations or capacity limits are proposed under the REF. Current water management measures will remain in place as per the relevant site wide plans.
(f) what will be the cumulative environmental impact of the proposal on the regulated catchment?	
(g) does the proposal make adequate provision to protect the quality and quantity of ground water?	

Factors	Response
Aquatic ecology	
(a) will the proposal have a direct, indirect or cumulative adverse impact on terrestrial, aquatic or migratory animals or vegetation? How?	Neutral impact. No changes to site operations are proposed under the REF. Current measures will remain in place as per the site wide plans.
(b) does the proposal involve the clearing of riparian vegetation?	No. No physical works are proposed.
(c) will the proposal minimise or avoid the erosion of land abutting a natural waterbody and/or the sedimentation of a natural waterbody?	Neutral impact. No changes to site operations are proposed under the REF. Current measures will remain in place as per the site wide plans.
(d) will the proposal have an adverse impact on wetlands (not including those in mapped coastal wetlands and littoral rainforests areas)?	No. No changes to site operations are proposed under the REF. Current measures will remain in place as per the site wide plans.
(e) does the proposal include adequate safeguards and rehabilitation measures to protect aquatic ecology?	Aquatic ecology was assessed as part of this REF within the SIS at Appendix 2. The proposed activity is not expected to impact aquatic ecology and current measures to protect aquatic ecology will remain in place as required by the relevant site wide plans.
(f) if the development site adjoins a natural waterbody, are additional measures required to ensure a neutral or beneficial effect on the water quality of the waterbody?	No additional measures are anticipated to be required as changes to site operations and capacity limits are not proposed under the REF. Current management measures will remain in place.
Flooding	
What is the likely impact of the proposal on periodic flooding that benefits wetlands and other riverine ecosystems?	N/A

11.2.2 Sydney Drinking Water Catchment

NorBE assessment questions	Response
1. Are there any identifiable potential impacts on water quality? What pollutants are likely? At what stage do the impacts occur?	No impacts on water quality are anticipated as no changes to site operations or capacity limits are proposed under the REF. Current measures as per the site wide plans will remain in place.
2. For each pollutant list the safeguards needed to prevent or mitigate potential impacts on water quality?	
3. Will the safeguards be adequate for the time required? How will they need to be maintained?	
4. Will all impacts on water quality be effectively contained on the site by the identified safeguards (above) and not reach any watercourse, waterbody or drainage depression? Or will impacts on water quality be transferred outside the site for treatment? How? Why?	

NorBE assessment questions	Response
5. Is it likely that a neutral or beneficial effect on water quality will occur? Justify	Neutral. No changes to site operations are proposed under the REF. Current measures as per the site wide plans will remain in place.

11.2.3 Sydney Harbour Catchment's Foreshores and Waterways Area

The site is located within the Sydney Harbour Catchment's Foreshores and Waterways Area.

Factors requiring consideration	Response
a) is the activity consistent with the following principles— <ul style="list-style-type: none"> i) Sydney Harbour is a public resource, owned by the public, to be protected for the public good ii) the public good has precedence over the private good iii) the protection of the natural assets of Sydney Harbour has precedence over all other interests? 	Yes. The proposed activity will ensure ongoing operation of the site beyond 2024. On this basis, public access and appreciation of the site's culture and heritage will be able to continue to be understood and interpreted by the public.
b) will the activity promote the equitable use of the Foreshores and Waterways Area, including use by passive recreation craft?	Yes. No changes to current site operations are proposed as part of the REF.
c) will the activity have an adverse impact on the Foreshores and Waterways Area, including on commercial and recreational uses?	No. The proposed activity will have a positive impact as it will ensure the ongoing operation of the site. On this basis, it will allow the site to continue to be accessed for commercial and recreational purposes.
d) does the activity promote water-dependent land uses over other land uses?	Neutral. The proposed activity will not impact on water-dependent land uses as no physical works or changes to site capacity is proposed.
e) will the activity minimise risk from rising sea levels or changing flood patterns as a result of climate change?	Neutral. No changes to site operations are proposed under the REF. Current measures as per the site wide plans will remain in place.
f) will the activity protect or reinstate natural intertidal foreshore areas, natural landforms and native vegetation?	Neutral. No changes to site operations are proposed under the REF. Current measures as per the site wide plans will remain in place.
g) does the development protect or enhance terrestrial and aquatic species, populations and ecological communities, including by avoiding physical damage to or shading of aquatic vegetation?	Terrestrial and aquatic species, populations and ecological communities at the site were assessed as part of this REF within the SIS at Appendix 2. The proposed activity is not expected to impact on these, including aquatic vegetation, as no physical works or changes to the site capacity are proposed. Further, current measures to protect ecology at the site will remain in place as required by the relevant site wide plans. In addition, recommendations in the SIS and Acoustic Report will be taken up to further protect relevant species and habitats.
h) will the activity protect, maintain or rehabilitate watercourses, wetlands, riparian	Neutral. No changes to site operations are proposed under the REF. Current measures as per the site wide plans will remain in place.

Factors requiring consideration	Response
lands, remnant vegetation and ecological connectivity?	

12 Summary of Impacts

The relevant assessment considerations under the Guidelines under Section 170 of the EP&A Regulation 2021 are provided below:

Environmental factor	Consideration	Significance of impact*
a) <i>the environmental impact on the community</i>	Social, economic and cultural impacts as described in sections 6.2, 6.3 and 10.	Not significant
b) <i>the transformation of the locality</i>	Human and non-human environment as described in section 6 and 10.	Not significant
c) <i>the environmental impact on the ecosystems of the locality</i>	Amount of clearing, loss of ecological integrity, habitat connectivity/ fragmentation and changes to hydrology (both surface and groundwater) and, for nationally listed threatened ecological communities, in section 10.	Not significant
d) <i>reduction of the aesthetic, recreational, scientific or other environmental quality or value of the locality</i>	Visual, recreational, scientific and other impacts as described in section 10.	Not significant
e) <i>the effects on any locality, place or building that has—</i> i. <i>aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance, or</i> ii. <i>other special value for present or future generations</i>	Impacts to Aboriginal and historic heritage associated with a locality (including intangible cultural significance), architectural heritage, social/community values and identity, scenic values and others, and for MNES heritage places section 10.	Not significant
h) <i>the impact on the habitat of protected animals, within the meaning of the Biodiversity Conservation Act</i>	Impacts to all native terrestrial species, including but not limited to threatened species, and their habitat requirements, as described in section 7 and 10.	Not significant
i) <i>the endangering of a species of animal, plant or other form of life, whether living on land, in water or in the air</i>	Impacts to all listed terrestrial and aquatic species, and whether the proposal increases the impact of key threatening processes, as described in section 7 and 10.	Not significant
j) <i>long-term effects on the environment</i>	Long-term residual impacts to ecological, social and economic values as described in all parts of section 10.	Not significant
k) <i>degradation of the quality of the environment</i>	Ongoing residual impacts to ecological, social and economic as described in section 10.	Not significant
l) <i>risk to the safety of the environment</i>	Impacts to public and work health and safety, from contamination, bushfires, sea level rise,	Not significant

Environmental factor	Consideration	Significance of impact*
	flood, storm surge, wind speeds, extreme heat, rockfall and landslip, and other risks likely to increase due to climate change as described in sections 10.	
m) <i>reduction in the range of beneficial uses of the environment</i>	Impacts to natural resources, community resources and existing uses as described in section 10.	Not significant
n) <i>pollution of the environment</i>	Impacts due to air pollution (including odours and greenhouse gases); water pollution (water quality health); soil contamination; noise and vibration (including consideration of sensitive receptors); or light pollution, as described in section 10.	Not significant
o) <i>environmental problems associated with the disposal of waste</i>	Transportation, disposal and contamination impacts as described in section 10.	Not significant
p) <i>increased demands on natural or other resources that are, or are likely to become, in short supply</i>	Impacts to land, soil, water, gravel, minerals and energy supply as described in section 10.	Not significant
q) <i>the cumulative environmental effect with other existing or likely future activities</i>	The negative synergisms with existing development or future activities as considered in section 10.	Not significant
r) <i>the impact on coastal processes and coastal hazards, including those under projected climate change conditions</i>	Impacts arising from the proposed activity on coastal processes and impacts on the proposed activity from those coastal processes and hazards, both current and future, as considered in section 10.	Not significant
s) <i>applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1</i>	Inconsistency with the objectives, policies and actions identified in local, district and regional plans, as considered in section 10.9	Not significant
t) <i>other relevant environmental factors.</i>	Any other factors relevant in assessing impacts on the environment to the fullest extent, such as native title.	Not significant

13 Justification and Conclusion

This REF provides an assessment of the ongoing operation of the site beyond December 2024. The proposed activity seeks:

- to obtain a new planning approval under Part 5 of the EP&A Act and Clause 171 of the EP&A Regulation for the ongoing operation of the Quarantine Station beyond 2024, consistent with the current lease
- rationalise the requirements of the planning approval in order to provide a streamlined, contemporary and more workable approval for both NHS and NPWS

There is no proposed change of use from the current approved Key Site Activities as outlined in the current conditions of approval nor are any new physical works proposed under this REF.

The REF has examined and taken into account to the fullest extent possible all matters affecting, or likely to affect, the environment by reason of the proposed activity.

As discussed in detail in this report, it is concluded:

- There **is not** likely to be a significant effect on the environment and an environmental impact statement **is not** required.
- There **is not** likely to be a significant effect on threatened species, populations, ecological communities or their habitats and a SIS has been provided.
- The activity **is not** likely to have a significant impact on matters of national environmental significance listed under the EPBC Act.

Given this, the environmental impacts of the proposal are not likely to be significant and therefore it is not necessary for an EIS to be prepared and approval to be sought for the proposal from the Minister for Planning under Part 5.1 of the EP&A Act.

On this basis, it is recommended that NPWS approve the proposed activity in accordance with Part 5 of the EP&A Act and subject to the adoption and implementation of matters outlined in this report.