

SUBMISSION: Management of Defence Estate Assets

Proposed partial divestment and future use of HMAS Penguin

Submitted by	Sydney Institute of Marine Science
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SIMS does not support the transfer of any part of HMAS Penguin for private development. The marine waters surrounding HMAS Penguin and Hunters Bay contain endangered ecosystems (seagrass meadows) and endangered animal species that depend on them (White's seahorse) that the Sydney Institute of Marine Science, in collaboration with NSW DPIRD Fisheries and NSW DCCEE, have been monitoring and restoring for the past five years. Any coastal development on this critical land will directly impact these critically endangered ecosystems. If land is no longer required for Defence purposes, it should remain in Commonwealth ownership and be managed for enduring public, environmental, scientific and heritage benefit.

Executive summary

The Sydney Institute of Marine Science, SIMS, is a collaborative marine research institute based at Chowder Bay on the former defence lands of Middle Head. Our submission is directed primarily to the environmental consequences and future public value of the proposed partial divestment of HMAS Penguin's land. We do not offer a view on the operational requirements of the Australian Defence Force beyond recognising that Defence has stated it will retain critical capability at the site.

Cobblers and Balmoral Beaches lie immediately adjacent to HMAS Penguin. These beaches are unique enclaves within the foreshore of Sydney Harbour that offer a significant value to our local tourism industry due to their relatively natural and scenic amenities. Additionally, this area contains remnants of a critically endangered ecosystem that is on the brink of extinction in Sydney Harbour: the seagrass meadows of *Posidonia australis* and its associated biodiversity. These meadows have been significantly degraded by coastal development in NSW and they are listed as endangered under NSW's Fisheries Management Act 1994 and Australia's Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). This area is also home to other endangered species associated with this ecosystem, the White's seahorse (*Hippocampus whitei*) and the endangered cauliflower soft coral (*Dendronephthya australis*). The current conditions in this area has allowed the Sydney Institute of Marine Science and partners to undertake a sustained program to restore endangered *Posidonia australis* seagrass, support recovery of the endangered White's seahorse, *Hippocampus whitei*, establish seahorse hotels, and relocate endangered cauliflower soft coral, *Dendronephthya australis* in the area. SIMS researchers are also examining the establishment and spread of subtropical corals in this part of Sydney Harbour.

These interventions contribute to Australia's commitment to conserve and restore 30% of its land and waters by 2030 as part of the Kunming-Montreal Agreement representing years of scientific work, regulatory approvals, public funding, specialist scientific and professional capability and community participation. The seagrass work alone required a lengthy approvals pathway before planting could begin. Restoration at Cobblers Beach is still developing and requires long term monitoring and protection from renewed pressures.

Any development on the steep catchment above these waters could change runoff velocities and volumes, flow paths, pollutant loads and sediment delivery during construction and operation. The precise impact would depend on the location, scale and design of development, which have not been disclosed. That uncertainty is itself material. It is not scientifically defensible to separate the future use of the terrestrial site from the receiving marine environment below it.

SIMS therefore submits that the Commonwealth should not sell or otherwise transfer the site for private development. If part of HMAS Penguin is confirmed as surplus to Defence requirements, the preferred pathway is retention in Commonwealth ownership and transfer to the Sydney

Harbour Federation Trust. Future planning should protect the complete catchment to ocean system and explore public marine science, education, restoration and monitoring uses that complement the continuing Defence presence and the existing network of public lands at Middle Head.

1. About SIMS and our connection to Middle Head

SIMS is a leading marine research and education facility and a collaborative hub for scientists and students from the University of Sydney, UNSW Sydney, the University of Technology Sydney and Macquarie University, together with government and other partners. SIMS addresses climate change, habitat and biodiversity loss, and supports marine conservation and restoration.

SIMS operates from Chowder Bay, on a former defence site now managed by the Sydney Harbour Federation Trust. Our location provides direct access to Sydney Harbour for field research, long term monitoring, education and the operation of specialist marine facilities. This access is difficult to reproduce in a densely developed globally connected city.

SIMS is therefore both a scientific stakeholder and a practical example of the lasting value that can be created when surplus defence land remains publicly owned and is adapted for a nationally significant purpose and local benefit. Had the Chowder Bay site been privately developed, this research capability and direct access to one of Australia's most urbanised waterways may have been lost permanently.

2. The receiving marine environment is part of the site

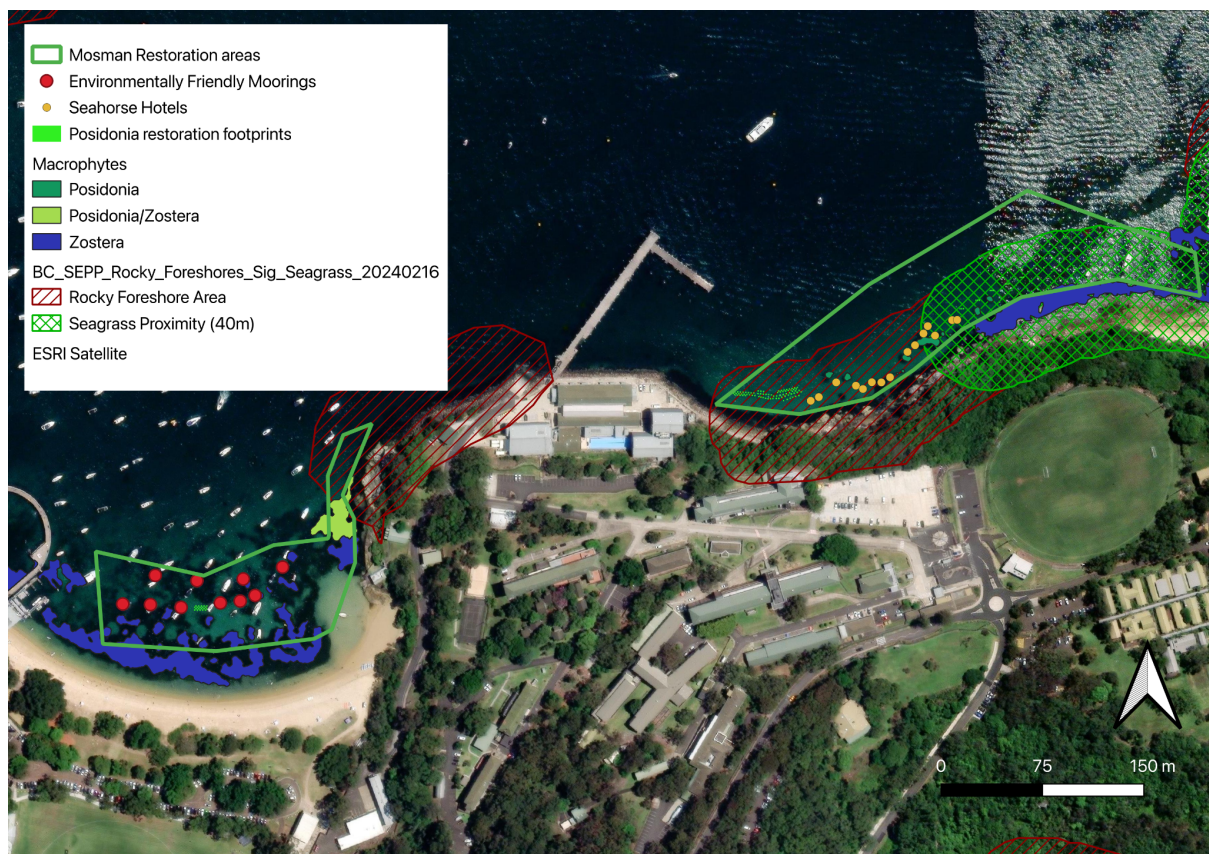
HMAS Penguin occupies approximately 16.64 hectares on the slopes of Middle Head above Balmoral and adjacent to Cobblers Beach. Defence has announced a partial divestment but has not finalised the portions to be divested. Without a settled boundary and future use proposal, it is not possible to quantify environmental effects. It is nevertheless possible to identify the principal pathways of risk and the potential implications for the marine ecosystem.

Urban development changes the way rainfall moves through a catchment. Impervious surfaces (e.g. additional roofs, roads, paved areas), and excavation and drainage infrastructure can increase and concentrate flows, mobilise fine sediments and contaminants, and shorten the time between rainfall and discharge to receiving waters thereby increasing the risk of erosion. Construction creates a separate period of elevated risk through exposed soils, stockpiles, vehicle movements and temporary drainage arrangements. Even where contemporary controls are proposed, performance depends on design assumptions, maintenance, compliance and rainfall conditions over the full life of the development.

For seagrass and other benthic habitats, water clarity and sediment conditions are fundamental. Increased turbidity reduces light for photosynthesis, while sediment deposition can bury leaves, shoots and smother habitat. Nutrients and contaminants can alter ecological processes. Concentrated flows can also erode shorelines and disturb sediments. These pressures are particularly significant where restoration is attempting to re-establish slow growing habitat in an already modified estuary.

The relevant unit of environmental assessment is therefore not the cadastral boundary of HMAS Penguin. It is the connected ridge, slope, drainage network, foreshore and receiving waters. Any assessment confined to direct impacts within a proposed development footprint would be incomplete.

3. Cobblers Beach is an active threatened species recovery site



Endangered *Posidonia australis* seagrass

Posidonia australis is a long lived seagrass that forms structurally complex meadows. These meadows stabilise sediments, improve water quality, store carbon, support invertebrate communities, provide nursery habitat for fish and provide food for animals including green turtles. The *Posidonia australis* seagrass meadows of the Manning to Hawkesbury ecoregion are listed as endangered under Commonwealth law. Six estuarine populations, including Sydney Harbour, are also listed as endangered in New South Wales following severe historical losses.

Project Restore, led through SIMS with government, university and community partners, received approval to undertake the first translocation of endangered *Posidonia* into Sydney Harbour from other New South Wales estuaries. Cobblers Beach was the first approved site. Thousands of shoots have been planted there, with further restoration also occurring around Balmoral and other harbour locations. The work has required specialist collection, handling, planting and monitoring methods, and a substantial regulatory and project development effort.

The significance of this investment is not limited to the number of shoots planted. *Posidonia* is slow growing. Recovery is measured over years and decades, and restoration success depends on the receiving environment remaining suitable throughout that period.

Hippocampus whitei and habitat restoration

The White's seahorse is listed as endangered under Commonwealth and New South Wales law. It depends on shallow estuarine habitat and has been affected by the loss and degradation of natural holdfasts, including seagrass and soft coral. SIMS and its partners have bred and released White's seahorses into Sydney Harbour, including releases at Cobblers Beach, and have installed seahorse hotels to provide interim structural habitat while natural habitat recovers.

The combined approach at Cobblers Beach is deliberate. Releasing animals, providing artificial habitat and restoring natural seagrass are complementary actions intended to rebuild a functioning ecological system rather than treat each species in isolation. We have spent years coordinating these efforts for the best possible marine ecosystem outcome.

Endangered *Dendronephthya australis* cauliflower soft coral

Dendronephthya australis is an endangered habitat forming soft coral endemic to south eastern Australia. It provides habitat for fish and invertebrates, including the White's seahorse. The species has suffered severe decline, and active propagation and transplantation are being used to support

recovery. SIMS is working with partners to relocate this coral at Cobblers Beach, adding another sensitive and conservation significant element to the site.

Changing marine communities

SIMS scientists are also investigating the occurrence and proliferation of subtropical (*Pocillopora aliciae*) corals in the area. The East Australian Current is a major pathway through which warmer water and marine organisms move southward along Australia's eastern seaboard. Long term access to sites around Middle Head allows researchers to detect ecological change and understand the consequences for habitats, biodiversity and management along the heavily populated east coast.

4. Restoration investment should not be placed at avoidable risk

The Commonwealth and New South Wales governments, universities, SIMS, project partners, scientists, volunteers and the local community have invested significantly in restoring these marine habitats and species. That investment is intended to produce benefits well beyond a single funding cycle. It would be poor use of taxpayer funds and public policy to support threatened species recovery in the receiving environment while allowing an avoidable land use change above it without first demonstrating that the recovery trajectory will be protected.

Environmental offsets or localised engineering measures should not be treated as equivalent to preventing harm. Newly planted *Posidonia*, released seahorses and transplanted soft coral cannot simply be replaced if changed catchment conditions cause a restoration site to fail. The scientific knowledge, approvals, time and ecological opportunity embodied in the site are not readily transferable.

SIMS is not asserting that every conceivable change of use would inevitably damage Cobblers Beach. We are asserting that private redevelopment introduces pressures and incentives that are difficult to reconcile with long term recovery of the adjoining marine environment. In the absence of a detailed proposal and a catchment to ocean assessment, the prudent course is to retain the land in public ownership and avoid creating the risk.

5. Required assessment before any decision

If the Government continues to consider divestment or a material change of use, SIMS recommends that the following work be completed and publicly available before a decision is made:

- a map showing the exact land, buildings, drainage assets, foreshore interfaces and maritime infrastructure proposed for retention and divestment

- *a baseline survey of terrestrial, freshwater, intertidal and subtidal environmental values, including active restoration plots and monitoring sites*
- *catchment hydrology modelling for existing conditions and credible future uses, including ordinary rainfall, construction phases and extreme rainfall under future climate conditions*
- *assessment of water quality, turbidity, sediment deposition, nutrients, contaminants, hydrodynamics and shoreline effects at Cobblers Beach and Balmoral*
- *assessment of direct, indirect and cumulative impacts on Posidonia australis meadows, White's seahorse, cauliflower soft coral and other protected or sensitive species and habitats*
- *a contamination and remediation assessment that addresses the risk of mobilising legacy contaminants during demolition, excavation or altered drainage*
- *a long term monitoring, maintenance and response plan with measurable thresholds, transparent reporting, secured funding and enforceable responsibility*
- *assessment of alternatives, including no private development, continued Defence use, transfer to the Harbour Trust and marine science or other public uses*
- *genuine consultation with Traditional Owners, scientists, environmental regulators, the local community and organisations responsible for current restoration programs*

6. Response to the inquiry's terms of reference

SIMS' evidence is most directly relevant to paragraph 4, financial assumptions; paragraph 7, prioritising alternative public uses; and paragraph 8, other related matters. It also intersects with paragraph 5 because the cultural landscape and environmental setting are part of the significance of Middle Head.

For paragraph 4, any calculation of net return should recognise costs and liabilities that are external to the sale price. These include assessment and remediation, stormwater and sediment controls, long term monitoring, the potential loss of restoration investment, and the opportunity cost of surrendering scarce waterfront infrastructure that could support public research and education.

For paragraph 7, HMAS Penguin presents a clear case for prioritising public use. The Harbour Trust provides an established Commonwealth mechanism for stewardship. Marine science and education provide credible adaptive uses with direct national benefit and strong alignment to the character and infrastructure of the site.

For paragraph 8, the inquiry should expressly recognise receiving environments beyond Defence property boundaries. Disposal policy should require assessment of connected catchments and

marine waters, especially where threatened species, listed ecological communities or publicly funded restoration activities may be affected.

7. A strategic opportunity for marine science

Australia's marine environment is changing rapidly. Sydney Harbour and the adjoining coast provide a living laboratory for understanding warming waters, species redistribution, habitat loss, pollution and the performance of restoration methods in highly urbanised settings. These questions are directly relevant to communities, infrastructure, fisheries, biodiversity and climate adaptation.

Waterfront research infrastructure is scarce and, once converted to private use, is exceptionally difficult to recover. HMAS Penguin has existing access to the harbour and infrastructure developed for maritime purposes. Subject to Defence requirements and a detailed feasibility assessment, retaining appropriate wharf, workshop, teaching, storage and waterside areas could expand national marine science capability and complement the facilities already operated by SIMS at Chowder Bay.

This is not a request that land be transferred to SIMS. It is a request that the Commonwealth preserve the option for high value public and scientific use before an irreversible disposal decision is made. A structured assessment involving Defence, Finance, the Harbour Trust, SIMS, member universities, Traditional Owners, Mosman Council and relevant agencies could determine whether a shared marine science and public purpose precinct is feasible.

Conclusion

HMAS Penguin is part of a connected Middle Head landscape extending from ridge to harbour. The waters below it contain endangered species and habitats that SIMS and its partners are actively working to recover. That work is scientifically complex, slow and dependent on maintaining suitable environmental conditions over the long term.

Private development would exchange a permanent public asset and future scientific opportunity for a short term disposal outcome, while introducing risks that cannot be fully understood until the development concept and divestment boundary are known. Once the land is sold and intensified, the decision will be exceptionally difficult to reverse.

SIMS therefore opposes the proposed development of the HMAS Penguin site. We recommend:

Recommendations

- 1. The Australian Government should rule out private residential or commercial redevelopment of any divested part of HMAS Penguin.*

2. *Any land confirmed as surplus to Defence requirements should remain in Commonwealth ownership and be transferred to the Sydney Harbour Federation Trust for protection, remediation and appropriate public use.*
3. *No disposal or future use decision should be made until the proposed boundary, development assumptions and infrastructure implications are publicly released and an integrated catchment and marine ecological assessment has been completed.*
4. *That the environmental assessment should address construction and operational stormwater, sedimentation, contaminants, altered drainage pathways, cumulative impacts, climate driven rainfall extremes, and impacts on threatened species, ecological communities and active restoration sites at Cobblers Beach and Balmoral.*
5. *The Commonwealth should establish enduring, enforceable protections for the terrestrial and marine environmental values of the precinct, together with funded monitoring and clear responsibility for responding to any deterioration.*
6. *Defence, the Department of Finance and the Sydney Harbour Federation Trust should work with SIMS, its member universities, Traditional Owners, Mosman Council and relevant agencies to assess future public marine science, education and restoration uses, including the preservation of suitable wharf and waterside infrastructure.*