



Marine Habitat Survey

Address | 22 Rednal Street, Mona Vale

Client | Anthony Saddington

Survey Date | 21 March 2025

Report Date | 5 May 2025

Job Number 25-083-08

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1. Report Background

1.1 Purpose of the Report

Crown Lands require that all proposed waterfront development works involving load-bearing structures located below the Mean High Water Mark be reviewed for compliance with environmental regulations. The aim of these regulations is to protect the marine environment, in particular the local fauna and flora such as seagrasses, mangroves and macroalgae. The body responsible for conducting the assessment during the planning stage of the proposed waterfront development is the NSW Department of Primary Industries and Regional Development Fisheries ("NSW DPIRD Fisheries").

The purpose of this report is to provide all the necessary data required for an assessment to be done by NSW DPIRD Fisheries.

1.2 Environmental Considerations

In summary, the main environmental considerations that require assessment by NSW DPIRD Fisheries for waterfront development applications are:

- a) Protection of seagrasses;
- b) Protection of mangroves;
- c) Conservation of the existing ecology; and
- d) Impacts from dredging.

The regulations upon which the environmental considerations are based are discussed below.

The Fisheries Management Act 1994 ("FM Act") applies to habitat and aquatic flora and fauna that have the potential to be affected by a proposed waterfront development. The objectives of the FM Act are to conserve, develop and share the fisheries resources of NSW for the benefits of present and future generations, and in particular to protect key fish habitats and to promote ecologically sustainable development. The FM Act states that

a person must not cut, remove, damage or destroy marine vegetation on public water land, or on the foreshore of any land or lease, except under the authority of a permit issued by the Minister under this Part (205) or of an aquaculture permit.

Two Fish Habitat Protection Plans have also been developed under the FM Act. The first plan deals broadly with dredging and reclamation activities, fish passage requirements, the protection of marine vegetation (in particular mangroves and seagrasses), and the importance of snags. The second plan is specific to the protection of seagrasses. Scientific research has shown that seagrasses are important to the ecology of shallow estuarine environments as they stabilise sediments and maintain water quality, provide shelter and food critical to the survival of a wide variety of juvenile fishes and mobile invertebrates (many of which are of commercial or recreational importance) and play an important role in the cycling of nutrients within estuaries. Seagrasses are a fragile ecological habitat, with many major estuaries in NSW having lost as much as 85% of their seagrass beds in the past

30 to 40 years. In 2012 the population of *Posidonia australis* seagrass (commonly known as strapweed) was listed as an Endangered Population in the estuaries of Sydney under the Fisheries Management Act (Part 7A).

1.3 The Property

The proposed waterfront development of the removal of the existing jetty, ramp, pile stabilised pontoon and fender pile; and installation of new longer timber jetty, ramp, longitudinal pontoon and mooring piles to create a relocated berthing area is planned for 22 Rednal Street, Mona Vale ("The Property").

For details of the existing structures at The Property and the proposed waterfront development refer to Sections 2.1 and 3.1 respectively.

1.4 On-Site Survey Methodology of The Property

The on-site survey of The Property was conducted at 12:30 on 21 March 2025 by Rick Johnson of Waterfront Surveys Australia. The weather conditions at the time of the survey were light rain with a minimal breeze. At the time of the survey the tide was rising, with an approximate tidal height of 1.1 m.

The on-site survey area included the footprint of the proposed structures and extended a further 10 m in all directions from the footprint of the proposed structures. The survey was conducted from the shore and inspection of the seabed was done on foot and on snorkel. Photos of each habitat were taken using an underwater digital camera and a description of each differing habitat, and species list of aquatic flora and fauna observed within the survey area, was recorded.

2. Existing Property Details

2.1 Existing Structures at The Property

The Property is located on the western shoreline of Winji-Jimmi Bay, in the south-eastern corner of Pittwater - approximately 340 m north of Yachtsman's Park. The Property faces in an east-north-easterly direction.

The existing waterfront structures present at The Property at the time of the on-site survey (Cover Photo and Photos 1 - 3) included:

- a timber jetty (19.0 x 1.3 m) supported on 12 PVC sleeved piers;
- a timber ramp (6.0 x 1.3 m);
- a longitudinal pontoon (7.0 x 2.1 m) with two timber stabilising piles on the northern side of the pontoon;
- one fender pile, located on the south-east corner of the pontoon.

2.2 Existing Ecology at The Property

2.2.1 Existing Ecology Based on Observations from the On-Site Survey

a) Intertidal Ecology

The intertidal zone within the on-site survey area of The Property consisted of natural habitats. The entire width of the site had a grassy shoreline which sloped gradually onto an area of sand, rocks, gravel and debris, which extended 6.5 m offshore to the line of the neighbouring seawalls (Cover Photo and Photo 1). This sandy/rocky area transitioned to a gradually sloping intertidal sand flat, which extended approximately 10 m seaward of the neighbouring seawalls, finishing 0.5 m beyond the end of the existing jetty. See aquatic habitat mapping in Appendix B.

The sandy rocky area (Photo 1) and the sand flat were unvegetated. The intertidal sections of the existing sleeved jetty piers were bare except for the fourth pair of piers (Photo 1) which had a growth of Sydney rock oysters (*Saccostrea glomerata*).

b) Subtidal Ecology

The subtidal zone within the on-site survey area of The Property started approximately 1 m beyond the end of the existing jetty and consisted of a gradually sloping seabed composed of silty sand that transitioned to finer, sandy silt approximately 10 m offshore of the existing pontoon (Photo 4). The gradually sloping sandy silt continued uniformly offshore beyond the survey area (see aquatic habitat mapping in Appendix B). The soft seabed across the whole site was bioturbated from the burrowing activities of benthic fauna (Photo 4).

The soft seabed across much of the site was colonised by a very low density bed of the green pest alga *Caulerpa taxifolia* (Photo 4; see aquatic habitat mapping in Appendix B). The *Caulerpa* started midway along the existing pontoon and continued offshore beyond the proposed new structures.

The subtidal sections of the existing pontoon piles and fender pile (Photo 5; proposed to be removed) were colonised by a low density growth of Pacific oysters (*Crassostrea glomerata*), along with a thin layer of brown filamentous alga and sparse white ascidians (*Styela plicata*). The existing pontoon (Photo 6; proposed to be removed) was colonised by a medium density assemblage of subtidal biota, including brown algae (scrollweed *Padina* sp. and filamentous), Pacific oysters, white ascidians (*Styela plicata*) and frilly bryozoa (*Bugula* sp.).

Fish observed during the survey included yellowfin bream (*Acanthopagrus australis*) and luderick (*Girella tricuspidata*).

c) Seagrass and Mangroves

No seagrass or mangroves were observed within the on-site survey area of The Property.

2.2.2 Existing Ecology Based on Government Published Records

NSW DPIRD Fisheries has done extensive mapping of the estuarine habitats and vegetation in all of NSW's estuaries (NSW DPIRD, 2023). The online map of January 2023 indicates the absence of seagrass and mangroves at The Property.

3. Proposed Waterfront Development

3.1 Proposed Structures of the Waterfront Development

The proposed waterfront development at The Property (included in this report in Appendix B) consists of the:

- removal of the existing timber jetty, ramp, pile stabilised pontoon and single fender pile;
- installation of a new longer timber jetty (37.5 x 1.4 m) in the same location as the existing jetty, supported on 16 piers and two end piles;
- installation of a new timber ramp (6.0 x 1.2 m) with two piles on either side at the end of the ramp;
- installation of a new longitudinal pontoon (7.0 x 2.4 m) with two stabilising piles on the outer corners, which would be located 15 m further offshore than the existing pontoon; and
- installation of a two new mooring piles south-east of the new pontoon to create a 9 x 5 m berthing area.

3.2 Assessment of Potential Impacts of the Proposed Development to the Existing Ecology of The Property

3.2.1 Summary of Findings

In summary, the potential impacts on the aquatic ecology at The Property from the removal of the existing jetty, ramp, pile stabilised pontoon and fender pile; and installation of new longer timber jetty, ramp, longitudinal pontoon and mooring piles to create a relocated berthing area are expected to be minimal, temporary and unlikely to cause significant damage to any marine life.

There were no seagrass or mangrove habitats within the survey area.

The inner eight pairs of proposed new jetty piers would be inserted into bare intertidal sandy/rock and sand. The remaining eight jetty piers and two jetty end piles would be inserted into subtidal silty sand, much of which was colonised by a very low density growth of the pest alga *Caulerpa taxifolia*. The proposed new pontoon and mooring piles would be inserted into sandy silt which was colonised by a very low density growth of the pest alga *Caulerpa taxifolia*. It has been assessed that the loss of a small area of intertidal sand and subtidal silty sand/sandy silt from the installation of the proposed new piers and piles would not have any adverse environmental impacts at the site. The installation of the 24 new piers and piles would result in the loss of approximately 1.2 m² of soft seabed, which would be compensated by the release back to natural seabed resulting from the removal of the existing 15 piers and piles (approximately 0.8 m²).

It is required that the barge operators take due care to prevent the spread of the pest alga *Caulerpa taxifolia* outside of the site to other bays and waterways, by clearing any *Caulerpa* leaves or fragments from their anchors and equipment.

The increased shading footprint from the proposed new structures and berthed vessel (located further offshore than the existing facilities) would have no adverse indirect impacts as there was no seagrass at the site.

3.2.2 Detailed Listing of Findings

The potential impacts to the existing ecology of The Property are assessed in detail below in relation to the four main environmental considerations:

- a) Protection of seagrasses;
- b) Protection of mangroves;
- c) Conservation of the existing ecology; and
- d) Impacts from dredging.

a) Protection of seagrasses

No ecological impact from the proposed waterfront development as there was no seagrass present in the survey area.

b) Protection of Mangroves

No ecological impact from the proposed waterfront development as there were no mangroves present in the survey area.

c) Conservation of the Existing Ecology

| <i>Development Works</i> | <i>Potential Impact to Existing Ecology</i> | |
|---|---|--|
| | <i>Summary</i> | <i>Discussion</i> |
| Installation of new jetty piers/piles, pontoon piles and mooring piles | Loss of a small area of soft intertidal and subtidal habitat | It has been assessed that the loss of a small area of intertidal sand and subtidal silty sand/sandy silt from the installation of the proposed new piers and piles would not have any adverse environmental impacts at the site. The installation of the 24 new piers and piles would result in the loss of approximately 1.2 m ² of soft seabed, which would be compensated by the release back to natural seabed resulting from the removal of the existing 15 piers and piles (approximately 0.8 m ²). |
| Installation of new jetty piers/piles, pontoon piles, mooring piles and pontoon | Provide replacement artificial intertidal and subtidal habitats | The installation of the new jetty piers/piles, pontoon piles, mooring piles and pontoon would provide new artificial intertidal and subtidal habitats at The Property, similar to that which is being demolished. It is expected that these new artificial habitats would be colonised by an assemblage of biota |

| | | |
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| | | similar to that colonising the similar existing structures. |
|--|--|---|

d) Impacts from Dredging

No ecological impact from the waterfront development as there is no dredging required.

Prepared by



Rick Johnson

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Appendix A - On-site Survey Photos

The following photographs taken by Rick Johnson during the on-site survey conducted at The Property on 21 March 2025 are provided overleaf:

- Photos 1 - 3. The existing structures at The Property, intertidal habitats and location of the proposed new structures.
- Photo 4. Soft subtidal seabed colonised by *Caulerpa* at the site.
- Photos 5 - 6. Subtidal biota colonising the existing piles and pontoon.

Photo 1. The existing jetty at The Property passing over the sandy and rocky intertidal area.



Photo 2. The existing timber jetty, ramp, pontoon, pontoon stabilising piles and fender pile – all of these structures are proposed to be removed.



Photo 3. View inshore from the approximate location of the proposed new pontoon.



Photo 4. Low density *Caulerpa* colonising the sandy silt seabed in the location of the proposed new pontoon piles and mooring piles.



Photo 5. Subtidal biota colonising the base of the existing timber fender pile (proposed to be removed).

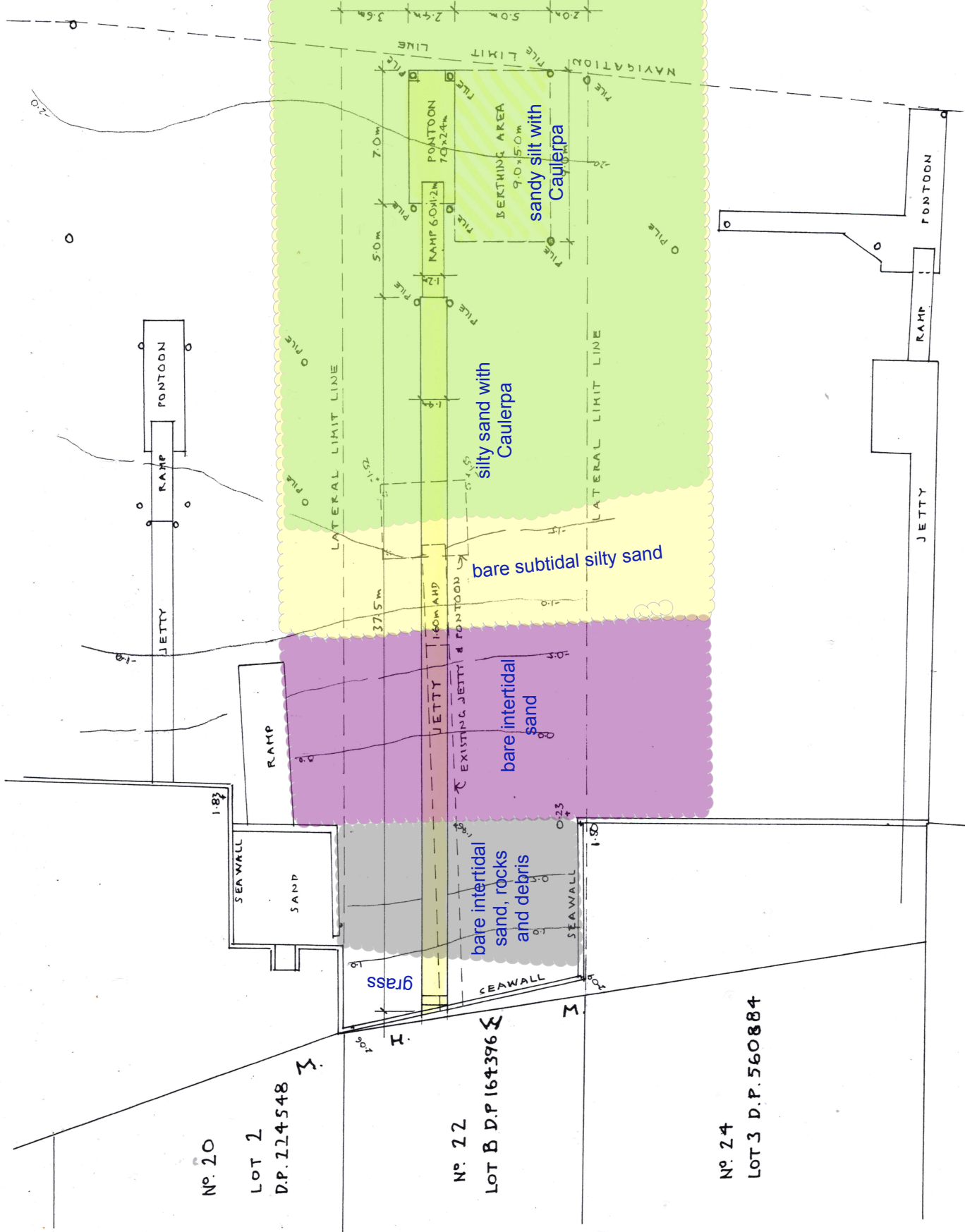
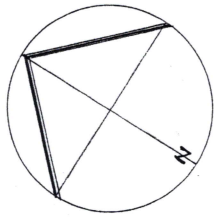


Photo 6. Subtidal biota colonising the existing pontoon (proposed to be removed).



Appendix B - Layout Plan of Waterfront Development and Aquatic Habitat Mapping

The proposed waterfront development design layout plan (provided by Stephen Crosby & Assoc.) and aquatic habitat mapping for 22 Rednal Street, Mona Vale is provided overleaf.



WINJI-JIMMI
BAY

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JOB
**JETTY, RAMP &
PONTOON,
BERTHING AREAS**

22 REDNAL ST.
MONA VALE, NSW
Lot B DP 164396

For
A. SADDINGTON
Drawing

**SITE PLAN
& SECTION**

Scale 1:200 AT A3
Date APRIL 2025
Drawn S.C.
Drawing Number

2035 - DA 01

Appendix C - References

NSW Department of Primary Industries and Regional Development (Jan 2023). *NSW Estuarine Habitat Dashboard*. https://nsw-dpi.shinyapps.io/NSW_Estuarine_Habitat/