

Bushland Management



Overview of presentation

- Overview of bushland management on the Northern Beaches
- Focus on bushland management in the Pittwater ward
- Constraints and management issues
- Bushland condition mapping and monitoring

Overview of Bushland Management on Northern Beaches

- Northern Beaches Council manages approximately 21.6km (2,160 ha) of Bushland
- This area is made up of around 390 reserves that we have recorded to date.
- Of this 212 reserves are managed actively managed in bush regeneration contracts.
- Grants – CRIF and Saving our Species

Distribution of Bushland

Wards	No Reserves	Area	TEC's (No, Area)
Manly	60	1km ²	5 TEC, 2.2Ha
Central (Wards Combined)	220	13.8 km ²	12 TEC, 18.8Ha
Pittwater	110	6.7km ²	9 TEC, 13.1Ha

Natural Environment Panel

Australian Bushland Restoration Pty. Limited

BARRC - Bushland & Rainforest Restoration & Consulting

Bush-it

Dragonfly Environmental

Jan Koltai

National Trust of Australia (NSW)

Bushlink

Sydney Bush Regeneration

Apunga Ecological Management

Terra Australis Regeneration

Toolijooa

Total Earth Care

Wadanguli Ecological and Landscaping Services

Waratah Eco Works

- The objective of our program has been to ensure a similar level of service to that provided by the three former Councils.
- How we aim to achieved this;
 - (1) Budgets from the former Council's retained (with adjustments over time)
 - (2) The staff from the former Council's have retained the management of their reserves
 - (3) We continue to work with the same contractors

Bushland Management in Pittwater Ward

- There is approximately 670ha of bushland in Pittwater within 110 reserves
- There are 87 reserves currently managed under bush regeneration contracts. The remaining reserves unfunded and managed on a reactive basis, or other departments of Council
- Former Pittwater staff continue to manage Pittwater reserves ensuring continuity of longstanding restoration projects.

Bushland Managed Under Contracts

AJ Small	Catalpa Reserve	Irrawong	Newport Heights Reserve	The Pinnacle BR
Algona	Catherine Park	Kanimbla Reserve	Norma Park	The Terraces/ Little Head
Anana Reserve	Cooyong Road Reserve	Kennedy Park	North Mona Vale Headland	Toongari
Anembo Reserve	Coronation Reserve	Kinka Reserve LLP00286	North Narrabeen Headland Reserve	Turimetta Headland
Angophora Reserve	Crescent Road Reserve	Koorowall Reserve	Old Wharf	Walana Crescent 24 C
Annie Wyatt	Crown of Newport	Kundibah	Palmgrove Park	Warriewood Beach Headland
Attunga Reserve	Dark Gully	Kywong	Pamela Reserve	Warriewood Wetlands
Bangalley Head	Deep Creek	Laitoki road side	Pindari	Wiltshire Park
Bilarong	Dolphin Park	Lake Park Reserve	Plateau Park	Winji Jimmi Reserve
Bilgola Bends	Elanora Road Reserve	Lot 1 Joalah Road	Porter	Winnererremy Bay Park
Bilgola North Headland	Elgata Reserve (B2B)	McCarrs Creek	Refuge Cove	Woodlands
Bimbimbie Reserve	Elizabeth Park	McKay	Rhoker Reserve	
Bothams Reserve	Epworth Park	Minkara	Saltpan Cove	
Browns Bay	Eungai Place Reserve	Mirbelia Road Reserve	Scot Is Elsie RR	
Bungan	Goodwin Reserve	Mona Vale Basin Reserve	Scot Is Pathilda	
Bush to Bay	Hamilton- Hewitt	Morella Reserve	Scot Is Thompson/ Fitzpatrick	
Bushrangers Hill	Hilltop Road Reserve	Myoora Road Reserve	Shearwater Reserve	
Cannes Reserve	Hordern Park	Nareen Wetland	South Bilgola Headland	
Careel Bay	Ingleside Chase	Narrabeen Creek / Boondah Reserve	Stapleton	

Unfunded Bushland Reserves

Alleynes Street Reserve	Elizabeth Street Road Reserve	Ingleside RFB	Peita Reserve	Sunrise Reserve
Bungalow Reserve	Elvina And Lovett Bay Reserves	Kennedy Place Reserve	Quarter Sessions Road Reserve	Trafalga Park
Bimbimie	Fern Creek / Lynne Czinner Park	Kia Reserve	Regatta Reserve	Valley View Reserve
Brinsidi Reserve	Fernbrook Sanctuary	Koorangi Reserve	Reserves of Lovett Bay (North) and Towlers Bay	Whale Beach Reserve
Careel Headland Reserve	Floods Peninsula Reserve	Little Head	Rocky Point Reserve 1A	
Cheryl Crescent Reserve	Florence Park	Lovett Bay Wharf	Rocky Point Reserve 1B	
Currawong Avenue Reserve	Frog Hollow	Mackerel Beach Reserve	Scot Is Harold Reserve	
East McCarrs Creek Reserve	Great Mackerel Beach Reserve	Malo Reserve	Scot Is Leahvera Reserve	
Edwin Ward Reserve	Ilya Avenue Reserve	North Avalon Headland Reserve	Shore Brace Road Reserve	

Constraints and management issues

- Budget
- Contractor resources
- Staffing capacity
- Climatic and environmental issues
- Competing priorities – eg bushfire management and other public safety related issues, CRM's
- Herbicide issues

Bushland Condition Mapping Project



ArcGIS Field Maps

The all-in-one app for mobile work

Background

- Council has responsibility for approximately 21.6km² of bushland within over 390 reserves
- No standardised or consistent approach to assessing the condition or mapping bushland assets
- The purpose of the project is to provide a baseline of the current condition of all bushland reserves
- This project will provide an excellent understanding of bushland condition, will allow for improved management decisions and track progress over time.

Bushland Condition Mapping

Assessment Criteria

Condition	Weed % Coverage	Description
1	0-9%	Native vegetation comprising canopy, mid storey, and ground cover intact with high species diversity. Minimal weed presence with minimal maintenance required. Intact soil profile, resilience considered high.
2	10-29%	Native vegetation comprising canopy, mid storey, and ground cover intact with high species diversity. Weed presence becoming evident at a minimal maintenance level. Intact soil profile, resilience considered high.
3	30-59%	Native vegetation comprising canopy and mid storey intact, native ground cover present but may be partially obscured by weed cover. Weed presence may range from maintenance to primary in the mid storey and ground cover. Soil profile generally intact, resilience considered medium to high.
4	60-79%	Vegetation comprising sparse native canopy with minimal species diversity, minimal native mid storey and ground cover. Dense weed infestations impacting ground cover and mid storey, exotic vines and trees may be impacting canopy. Weed presence considered primary control range, some disturbance to soil profile evident (dumping, stormwater impacts), resilience considered low.
5	80-100%	Vegetation community devoid of or minimal native vegetation presence. Weed considered within the primary control range, disturbed soil profile, resilience considered low.

Bushland Condition Map



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Field Notes - Points

Field Notes - Lines

2: 10-29% Weed Coverage

3: 30-59% Weed Coverage

4: 60-79% Weed Coverage

5: 80-100% Weed Coverage

1: 0-9% Weed Coverage

Unmade Roads

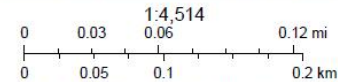
Parent Properties Reserves

nearmap_au

Red: Band_1

Green: Band_2

Blue: Band_3



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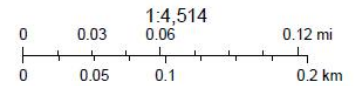
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Bushland Condition Map



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- | | | | | |
|-------------------------|--------------------------|-------------------------|----------------------------|---------------|
| ● Field Notes - Points | 4: 60-79% Weed Coverage | Bushland Condition | 4: 60-79% Weed Coverage | nearmap_au |
| Field Notes - Lines | 5: 80-100% Weed Coverage | 1: 0-9% Weed Coverage | 5: 80-100% Weed Coverage | Red: Band_1 |
| 2: 10-29% Weed Coverage | 1: 0-9% Weed Coverage | 2: 10-29% Weed Coverage | Unmade Roads | Green: Band_2 |
| 3: 30-59% Weed Coverage | 3: 30-59% Weed Coverage | 3: 30-59% Weed Coverage | Parent Properties Reserves | Blue: Band_3 |

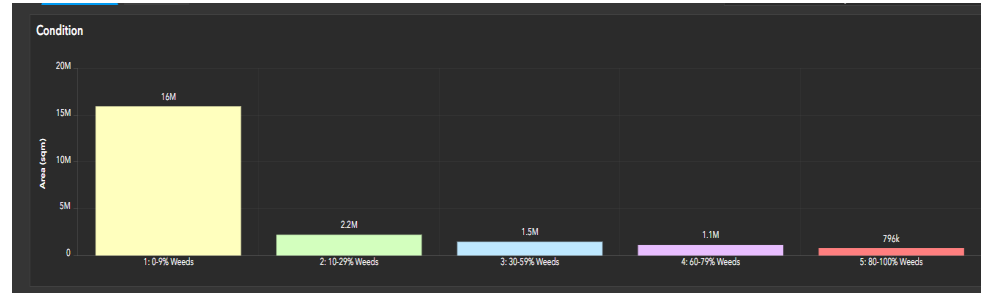
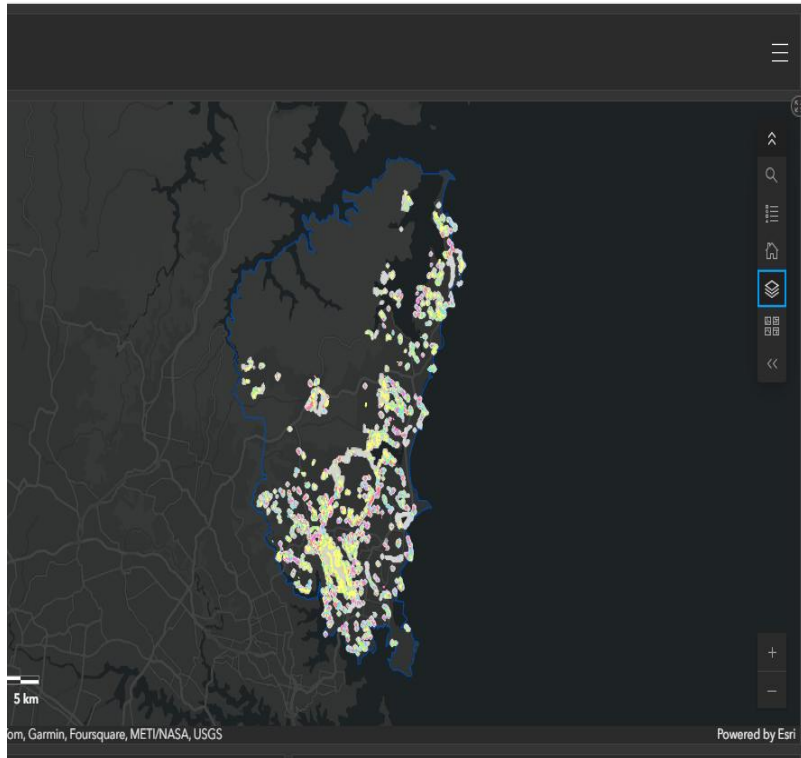


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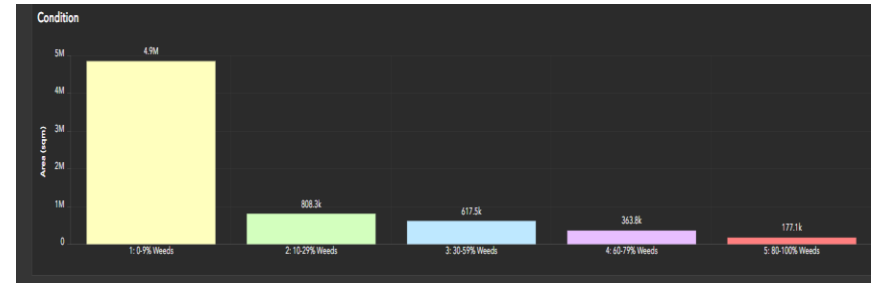
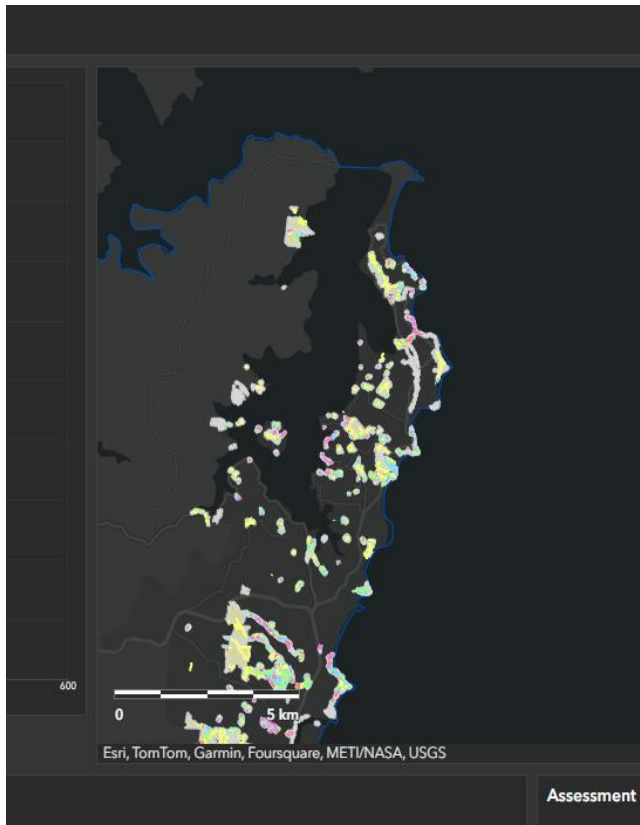
Northern Beaches Bushland Condition



Assessment Complete

21.6km²

Pittwater Ward Bushland Condition



Assessment Complete

6.8km²

Comparison of Bushland Condition

Condition	Northern Beaches	Pittwater
1	1,600ha	490ha
2	220ha	81ha
3	150ha	62ha
4	110ha	36ha
5	80ha	18ha