



NATIONAL PARKS ASSOCIATION OF NSW
protecting nature through community action

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Summer edition 124
SOUTHERN SYDNEY BRANCH

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A Special Edition on wetlands and estuaries

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BUSINESS MEETINGS All are welcome to attend, have your say and hear what's happening in the NPA. Contact Peter on 95287341 or Gary on 95701813 for details. These meetings are now held on either the 1st or 2nd Wednesdays of the month, except when this coincides with school holidays

BRANCH MEETINGS: Come and meet other members from your local area, new members and friends are most welcome. These meetings are organised for you, are informal, informative and relaxing. An interesting evening is guaranteed and supper is provided. The venue for Branch meetings is the Multi-Purpose Centre, 123 Flora St Sutherland (near Belmont St) 3 minutes' walk from the railway station and with plenty of parking. All meetings commence at 8.00pm. Now held on the 4th Wednesday night every second month.

The next meeting is February 27th

Our Branch

The NPA offers members over 1000 free midweek and weekend activities a year including bush walks, canoe trips, bike rides, biodiversity surveys, bird watching, and family trips. Activities cater for all levels of fitness. Easy/short walks, day bushwalks, overnight bushwalks, week bushwalks, educational walks.

Walks/Activities

Friday, 30 th November	Minnamurra to Kiama (BE)
6 th to 12 th December	Kosciuszko trip (EC)
Sunday, 15 th December	Fund-raising Sausage Sizzle at Kirrawee (EC)
Friday 21 st December	Xmas Lights/ Burnum Burnum sanctuary (EC)
26 th December to 2 nd January	Kosciuszko (EC)
Tuesday 1 st January	Otford to Bundeena by moonlight (EC)
Sunday 6 th January	Lawson Falls (EC)
Tuesday, 8 th January	Clovelly Snorkeling (EC)
Wednesday, 9 th January	Faulconbridge to Springwood (BE)
Saturday 12 th January	Erskine Creek (EC)
Sunday, 13 th January	Kangaroo Creek, RNP (BE)
Friday, 18 th January	Wattamolla to Marley (BE)
Saturday, 2 nd February	Waterfall to Heathcote via Lake Eckersley (BE)
Wednesday, 13 th February	Photography: Bonnie Vale/ Jibbon Head (BE)
Friday, 1 st March	Little Llangothlin Nature Reserve (BE)

Contact Esther Chow (eeesee@gmail.com) or Brian Everingham (brian.everingham@gmail.com)

Update from the NPWS

The Greater Metropolitan Branch RAC has now been constituted and by the time you receive this newsletter it should have had its first meeting and selected its Chair for the year. The Minister has finally selected the NPA/NCC representative (Brian Everingham) though for a one year term only.

Expect draft plans of management to be released for public exhibition in the next year for Kamay-Botany Bay NP and Royal NP.

And if you wish to become involved in weeding in Royal why not contact Neville Beth on nevillebethe@gmail.com. My advice is the phone better so use 9520 6965.

Paul Lofts, NPA stalwart, has done a lot of work in the park and writes:

We work in Royal or sometimes Heathcote NP on Thursdays and Saturdays.

We used to work in the plant nursery and we have planted quite a lot of native seedlings in the park over the years. Quite a few have not survived but many have. Some are middle sized and some are big! We now work one day a month in the nursery with Sutherland Council.

Otherwise, we dig out and pull out weeds; lots of them. I find it interesting to find out the weed's origins; a weed is a native somewhere, unless it's a hybrid.

We pull out a lot of Crofton weed, native to Mexico, and South Africa has been quite generous with its weed exports to us! To balance matters, wattle is a pest in Southern Africa. Another common weed is mother of millions, native to Madagascar. We put the weeds in bags and leave them for the NP&WS staff to take away. Once I was working and came upon a garden of Patersonia. It was like a thank you present from nature for our hard work.

It's field work like what Paul does that gives the stretched staff of NPWS the support it needs to help maintain our parks and enables us, the public, to enjoy the beauties of the bush.

If you wish to learn more about weeds before going out and helping (though when there you get lots of direct practical advice) go onto <https://sydneyweeds.org.au/all-about-weeds/weed-identification/>



Mother of Millions

Wetlands

What are Wetlands?

Wetlands are areas of land where water covers the soil – all year or just at certain times of the year. They include:

- swamps, marshes
- billabongs, lakes, lagoons
- saltmarshes, mudflats
- mangroves, coral reefs
- bogs, fens, and peatlands.

Why are we highlighting wetlands?

“Wetlands are a critical part of our natural environment. They protect our shores from wave action, reduce the impacts of floods, absorb pollutants and improve water quality. They provide habitat for animals and plants and many contain a wide diversity of life, supporting plants and animals that are found nowhere else.

Wetlands provide an important range of environmental, social and economic services. Many wetlands are areas of great natural beauty and many are important to Aboriginal people.

Wetlands also provide important benefits for industry. For example, they form nurseries for fish and other freshwater and marine life and are critical to Australia's commercial and recreational fishing industries.

Wetlands are the vital link between land and water”.

All of the above can be found on the Australian Government’s webpage.¹

It is clear that there is a commitment to protecting and educating about wetlands and yet we still are losing wetlands at an alarming rate. This special edition of the Southern Sydney Branch Newsletter will go further into their importance, into the threats they face and into our own local wetlands of importance. We hope that you will then not only come to know more about our own wetlands but on February 2nd, 2019, help educate others about their special role and celebrate them on World Wetland Day.

Note that Australia has 65 Ramsar sites (wetlands of international significance) and more than 900 wetlands that are considered nationally important.

¹ <http://www.environment.gov.au/water/wetlands/about>

Ramsar

What is the Ramsar Convention?

The Ramsar Convention is also called the Convention on Wetlands and it is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. It is the oldest of the modern global intergovernmental environmental agreements. The treaty was negotiated through the 1960s by countries and non - governmental organizations concerned about the increasing loss and degradation of wetland habitat for migratory waterbirds. It was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975. Its strength is the role both government and nongovernment bodies play in its operations.

The governance of the Convention is via a series of conferences of contracting parties (known in short as COP) and they meet every three years, set the work program for the organisation, discuss and pass resolutions and recommendations and provide direction for a standing committee and a Secretariat.

In October 2013 the 13th COP met in Dubai and its findings are already available online². Of interest are resolutions on:

- the fourth Strategic Plan of the Ramsar Convention
- enhancing the Convention's implementation, visibility and synergies with other multilateral environmental agreements and other international institutions
- the status of Sites on the List of Wetlands of International Importance
- future implementation of scientific and technical aspects of the Convention for 2019-2021
- guidance on identifying Wetlands of International Importance (Ramsar Sites) for global climate change regulation as an additional argument to existing Ramsar criteria
- promoting conservation, restoration and sustainable management of coastal blue carbon ecosystems
- cultural values, indigenous peoples and local communities, and climate change mitigation and adaptation in wetlands
- sustainable urbanization, climate change and wetlands
- promoting the conservation and wise use of intertidal wetlands and ecologically associated habitats

They were not the only resolutions and recommendations dealt with but quite a few of those are relevant to what wetlands we have in our own local area.

² <https://www.ramsar.org/about-the-cop13>

Wetlands in NSW³

Many years ago NPA undertook a survey of wetlands along the coastal strip of NSW. Ever since we have taken a keen interest in the state of our wetlands and in the management of the environmental flows in our rivers, be they on the coast or in the inland of our state.

Currently there are twelve wetlands within NSW that are listed on that Ramsar Convention. They include Blue Lake, in Kosciuszko, Lake Pinaroo in the Fort Grey Basin in Sturt National Park, Myall Lakes, Fivebough and Tuckerbil Swamps near Leeton, Little Llangothlin Nature Reserve north of Armidale, the NSW Central Murray Forests⁴, the Gwydir wetlands, Narran Lake Nature Reserve, Paroo River wetlands⁵, the Hunter Estuary, Macquarie Marshes and our own Towra Point. The location and values of each site can be obtained at

<https://www.environment.nsw.gov.au/topics/water/wetlands/internationally-significant-wetlands>



Red-kneed Dotterels on Fivebough Swamp

In addition there are many other wetlands of national and state significance and in NSW an Inventory of Wetlands is currently under preparation⁶ within a framework within which long term water plans are meant to be prepared and the OEH is to manage environmental water

³ <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Water/Wetlands/distribution-of-wetlands-new-south-wales.pdf?la=en&hash=66B25F648802C6EBCBFF537292E9BB8BAD08DC57>

⁴ The Millewa forests, a River Red Gum Forest that NPA has spent many years fighting to protect. Now within a national park but threatened with delisting by a motion from the local National Party member and supported by the Deputy Premier.

⁵ The Paroo River is in far western New South Wales. It is considered the last free-flowing river in the Murray–Darling Basin.

The Ramsar site consists of 2 parts:

Nocoleche Nature Reserve (71,133 hectares), near Wanaaring and the Peery Lake section of Paroo–Darling National Park (67,171 hectares), near White Cliffs.

⁶ See <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Water/Wetlands/nsw-wetland-inventory-project-2017.pdf>

flows. In the Murray–Darling Basin, the Murray–Darling Basin Authority is responsible for coordinating Basin-wide water resource planning and management.



Hunter Estuary

There is much to be concerned about. It does not take much awareness to realise that this is not working well. Environmental flows have been cut to less than what scientists believe is necessary for healthy ecosystems and even those have been diverted to other uses. In addition there has been water theft, lack of enforcement and lack of accountability. Our wetlands are under threat and we, in NPA, are most concerned. In addition we must note that even those wetlands listed as protected face enormous pressures.

The good news is that wetlands are a key priority for reservation and protection under the NPWS plans to create resilience in our national park system. Inland we have had:

- Gwydir Wetlands State Conservation Area: Over 8000 hectares acquired since 2011 protecting wetlands north east of Moree. The Gwydir Wetlands are considered to be one of the most important sites in Australia for colonial nesting waterbirds.
- Toorale (91,000 hectares) on the Darling Riverine Plains (reserved 2010). This purchase included substantial water entitlements.

Let us hope for a good outcome for all!

Coastal Wetlands within Our Branch

In our last newsletter you will recall that we focused on the need to protect our marine environment. Many of the sites we have called for protection in our own submission to the Government's aborted inquiry into marine protection within the Hawkesbury Marine Bioregion adjoin the land and many are therefore truly considered wetlands. Such examples include rock shelves, estuaries and mudflats. All are sites that are sometimes inundated and sometimes clear of water. All are transition zones and all are rich in biodiversity and require management.

Below are a selection of some of the sites we wish to preserve. Why not visit them over the summer and find out for yourself why they are special!

Long Bay

Environmental values: A diversity of habitats in a small area eg Complex rocky structures along the sides of the bay, including overhangs and boulders. Kelp and sand in the middle.

Support of Site Selection Criteria: This site has an increasing area of crayweed habitat types due to the academic and community support created by crayweed revegetation trials by UNSW researchers. Sanctuary status will further enhance follow up on effectiveness of revegetation and increase connectivity between natural and restored crayweed communities.

Little Bay

Environmental Values:

Crayweed restoration projects reportedly in progress.

Many tropical fish recruits in summer adding to its value as a climate change impact laboratory

Many complex habitats for cryptic species

Protection from Southerly underwater surge

Social Values: This is the perfect beach for a swim, the water is very calm as well as the beach. Even on weekends the beach is not very crowded.



Boat Harbour

This entire ecosystem is currently threatened by 4WD visitors who have been seen actually driving on the reef. The role as roosting and feeding sites for migratory waders has been expanded with the loss of suitable habitat on the northern foreshores of Botany Bay. The waters surrounding the rock platform have Crayweed remnants, and these are threatened by continued unmanaged fishing. There are diverse marine communities centred on Merries Reef, Pimelwi Rocks, The Wanderers and Osborne Shoals where a rare mollusc is also reported.

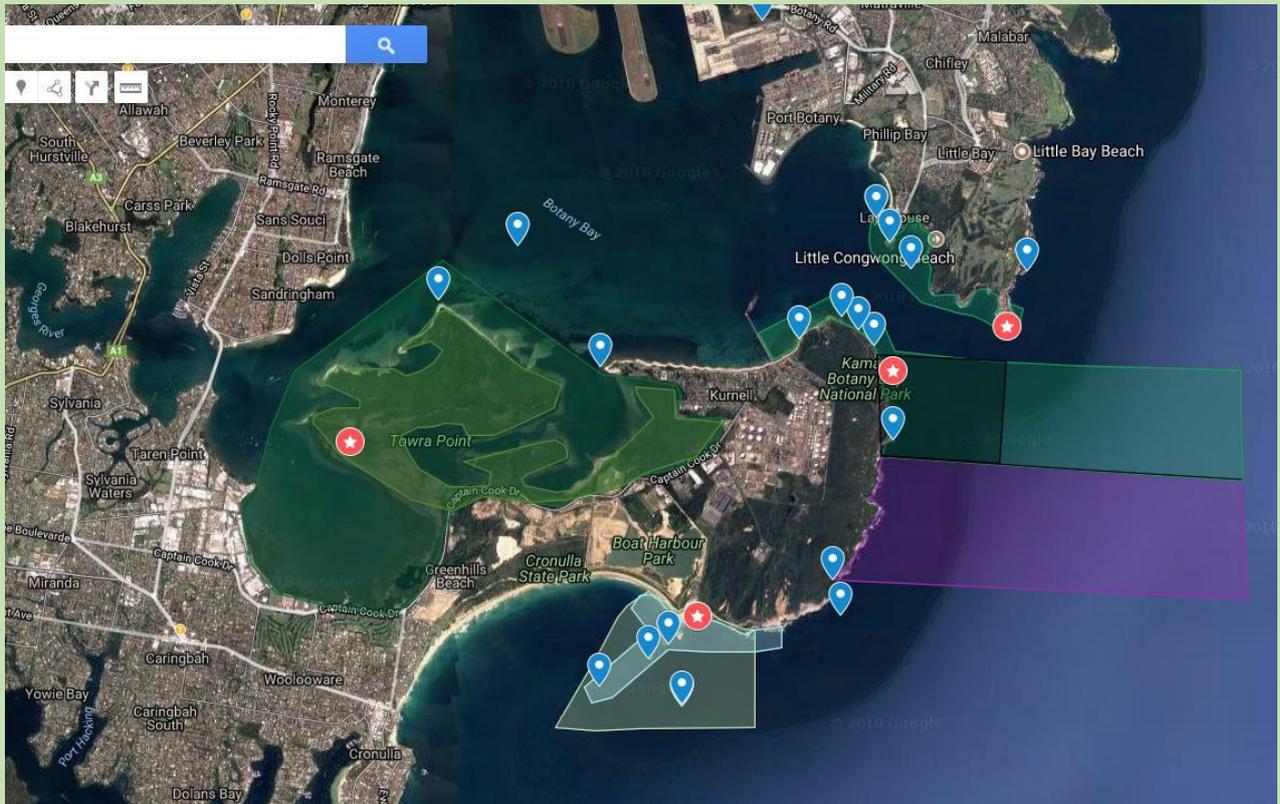
The Osborne Shoals' conservation within a sanctuary would protect a significant habitat type in the bioregion. Sanctuary protection, as illustrated in the map, would also help to conserve a moderate sample of the only ocean embayment in the bioregion. The draft site proposals completely ignore conservation of this habitat type, so CAR principles have been avoided once again. This additional sanctuary will also contribute to a moderate increase in the bioregion's sanctuaries going some more significant way towards international body's recommendations as previously enunciated.

Support of Site Selection Criteria: Several threatened bird species with roosting and feeding sites here would be better protected under Sanctuary status.



Golden Plovers and Red-necked Stints at Boat Harbour

Towra Point



Currently Towra Point has a nature reserve classification with an adjoining Aquatic Reserve.

The many values of Towra Point are not reflected in the substantial existing fishing allowed in sections of the present Aquatic Reserve and intended additional Special Purpose Zone that fail to fully conserve its waterways. The large area of seagrasses especially *Posidonia* and nesting little terns, potentially impacted by people landing from boats, means that the entire waterways need to be fully protected. We have argued that the MEMA draft proposal, that draws on the non-legislated status of Botany Bay as a recreational Fishing Haven to justify no additional sanctuaries, is invalid if MEMA truly wishes to minimise the risks to this very special congregation of Bay and intertidal habitats. Here is what is at risk without adequate zoning provisions: 600 Ha Seagrass (4 species), breeding endangered little tern, Ramsar wetland, mangrove, and wading birds; 400 Ha mangroves. It is on the register of the National Estate. Much of existing aquatic reserve could be declared a Marine National Park worthy of unified OEH management in association with Towra Point Nature Reserve. Debbie Andrews, NSW Wader Study Group and member of Oatley Flora and Fauna Conservation Society and former N.P.W.S. Natural Heritage Officer, has proposed an expanded boundary for sanctuary as per the attached map.

There is a very active bird watching community that closely monitors arrival and breeding of migratory (including threatened) waders, and would be among the major stewards for protecting this area as well as NPA which has advocated for stronger protections and habitat restoration over many decades.

Royal National Park

Environmental Values: Large areas of exposed intertidal beaches (e.g. Little Marley) rock platforms (e.g. adjacent to South Marley Headland) and Boulder beach (e.g. Nth Era), shallow rocky reefs and extensive inshore sand habitat that has been threatened by offshore sand mining leading to an original (26 year strong) proposal for a marine park off Royal National Park, two years before there was a Marine Park.

Some of the most pristine waters in the bioregion due to isolation from low quality river outlets. Whales follow cliff lines, often coming close to shore, with much whale watching from Bundeena and Wattamolla.

A marine extension off Australia's first national park would be an iconic addition. High educational value of alternating sanctuary and special purpose protection zones provides a model in accommodating multiple uses, while ensuring adequate size of sanctuary components and a major research asset containing oceanic, beach and rock platform scientific reference sites for metropolitan and Wollongong Universities usefulness.



Garie Beach and headland

Wetlands in the Southern Sydney Metropolitan Catchment Management Areas

By Tomas Kelly *

Along with maintaining Sydney's vital freshwater supplies, the Southern Sydney Metropolitan Catchment Management Areas (CMAs) contain some of the region's most pristine parcels of native bushland which are home to some 80 threatened fauna and flora species (DEH, 2005). The Woronora, Cataract and Cordeaux CMAs form a near-continuous network of vegetated lands extending from Southern Sydney in the north, to Wollondilly in the south. The environmental values of these lands present important conservation considerations, particularly in the context of increasing human demands on the natural resources of Southern Sydney.



Stegostyla testacea in Dharawal National Park

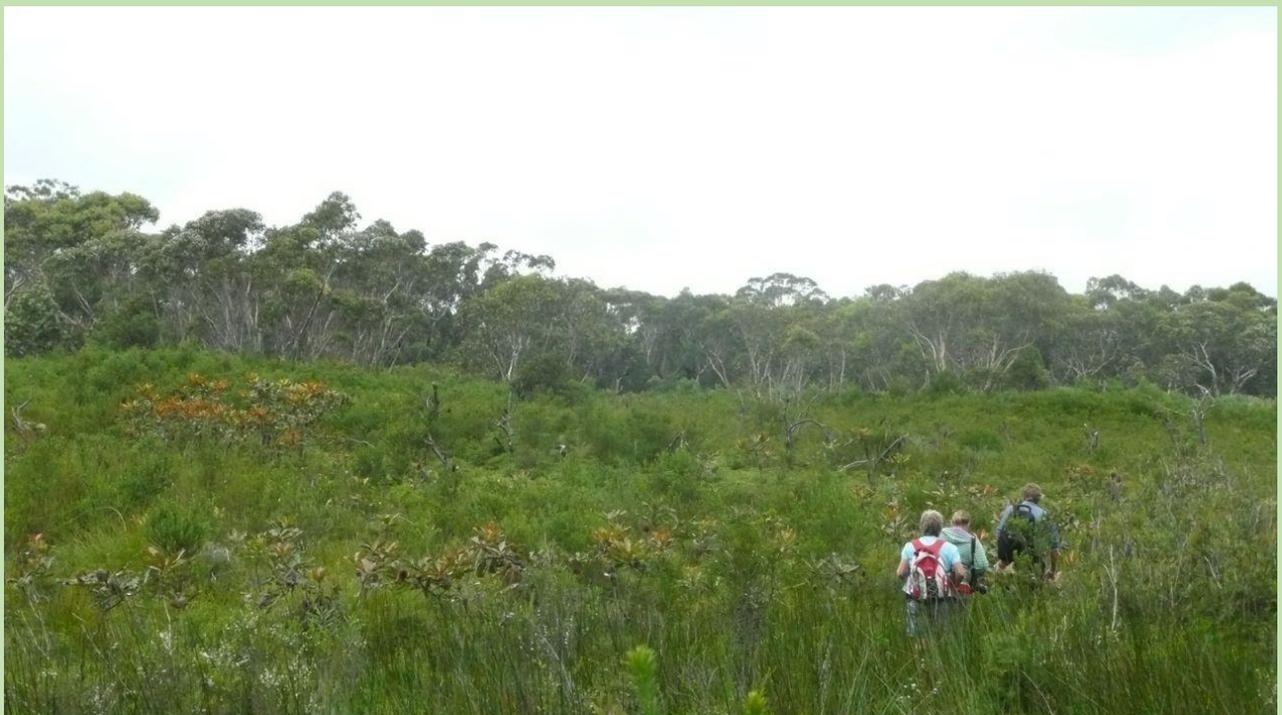
Coastal Upland swamp, heath and sedge-land environments are key habitats for many threatened species found in the Woronora, Cataract and Cordeaux CMAs and are some of only few remaining sites in the greater Sydney region. No less than 12 Threatened vertebrates are recorded for these habitats for the Greater Southern Sydney Area including the Giant Burrowing Frog and the Beautiful firetail that may depend on places like the Woronora Special Area as an intermediate stopover point for migration between known habitats in Royal National Park and Dharawal State Conservation Area and Nature Reserve (DECC, 2007) . These environments play a vital role not only as primary habitat sources for these species, but also as filtration and recharge zones for the greater catchment (DECCW, 2011; Young, 1982). The functioning of these environments ensures the preservation of ecosystem health, as well as the purification of Sydney's freshwater supplies. Southern Sydney's CMAs are therefore areas of high conservation value due to their role in maintaining the well-being of both human and natural resources.

The natural corridors and dispersal routes formed by the Woronora, Cataract and Cordeaux CMAs adds further to the conservation values of these areas. Expansive nature corridors have

been shown to provide an array of ecological benefits including increasing genetic diversity and natural resilience to ecosystem and external pressures (Parker et al, 2008). The three CMAs mentioned above form an ideal north-south dispersal route which may become increasingly important due the potential impacts of climate change and continued urban sprawl.

Maintenance of the corridors formed by the Southern Sydney CMAs could be implemented to provide linkages between fragmented native land parcels and existing protected lands such as the Garrawarra, Dharawal and Illawarra Escarpment State Conservation Areas. NPA believes that the natural qualities if these so called “Special Areas” will be compromised if development, (and even exploration in several cases) of coal seam gas deposits is allowed to occur here. It is not hard to imagine Nature Reserve quality lands being replaced by a 20 x 12 km gas wasteland with severely compromised ground and surface water if the NSW government fails to hear the united call of Southern Sydney’s and Northern Illawarra’s residents to exclude Coal Seam Gas mining from these water catchment areas...and from all National Park estate lands and linking green corridors. Such exclusions would mark a significant step towards the sustainable protection of Southern Sydney’s natural resources.

Continued awareness concerning the conservational importance of Southern Sydney’s CMAs can help ensure that these areas maintain their value as vital systems for both human and natural functioning.



In November the Branch wrote to the Chief Scientist NSW in regards to an Inquiry related to “the environmental consequences for swamps” within those catchments.

National Parks Association of NSW Southern Sydney Branch would like to add further comments to the major NPA submissions already listed in your notice of this Inquiry related to “the environmental consequences for swamps” as listed in your areas of particular interest.

Our Branch has already made a number of submissions to local environmental studies related to these catchments and especially enunciated in some detail potential impacts for endangered swamp ecosystems at the Planning and Environment Commission related to BHP's interest in mining the Bulli Seam beneath the then Dharawal State Conservation Area (Attached) which we further submit as it provides many cogent arguments, which with those provided by other NGOs and community members led to the Planning and Assessment Commission and then the NSW Government formally rejecting the request to mine this seam in this location, especially because the PAC was not convinced that it could be done on the scale envisaged without not some viable risk to the extensive swamplands on which a rich flora and fauna depended.

These lands are now National Park Status demonstrating that there is at least one example locally where coal mining impacts on lands similar to those in the formal drinking water catchment areas led to conservation of these lands via a strengthened tenure. The mandate to protect the floral, faunal and water quantity and quality values in the water catchments is no less than were acknowledged through the strong protective measures implemented.

NPA has further produced a paper that summarises the faunal values, in particular, that continue to be threatened as more upland swamps are impacted and river beds drain due to long wall mining impacts. While this paper was catalysed by threats from Coal Seam Gas exploration and development, the enunciation of faunal values at risk from long wall mining of the scale happening at the moment, is still relevant to the current Inquiry. It documents what can be lost if the endangered swamps continue to be threatened and the tributaries drained...containing water important to local fauna, not just human users.

These impacts and not inconsiderable risks have been known to the NSW Government over many years. This is not the first time that there has been a review of these risks.

NPA Southern Sydney Branch requests that the Panel and Chief Scientist recommend, based on extensive evidence and detailed predictive impact analysis, that floral and faunal impacts together with real risks to water quality and quantity be finally considered as pressing reasons why coal mining using such massive, damaging long wall technology be phased out in the shorter term. We understand that the existence of coal mining in drinking water catchments worldwide is a rare phenomenon indeed, and well documented floral and faunal values that are threatened demand that the NSW government acts quickly to negate these existing and predicted impacts.

NPA shares with other key NGOs the belief that these catchment lands be gazetted as nature reserves under the NPW Act to better protect their natural values once mining is phased out urgently in the short term.

Botany Wetlands

Once upon a time the Botany Wetlands were extensive and in pristine condition, so much so that when the Tank Stream was polluted and of no further value to provide fresh water for the colony the City of Sydney Council began acquiring land in and around the Botany Wetlands for the city's third official water supply. That was in 1855!

In 1859 a pipe was laid from those wetlands to the Crown Street Reservoir and over the course of the next decade or so six dams were constructed. By November 1888, most of Sydney's water supply was coming from the Nepean system, although Botany Swamps topped up water supplies during water shortages, until 1893.⁷

It is therefore rather sad that so much of what were once extensive and healthy wetlands are now lost to us, covered in housing, polluted by industrial waste and or tamed into ponds. This, despite the fact that as well as its importance to the water supply, "the Botany Swamps area includes two regionally rare and distinct remnant vegetation communities of State significance - the Sydney Freshwater Wetlands and Eastern Suburbs Banksia Scrub.

They are listed separately as 'Endangered Ecological Communities' under the Threatened Species Conservation Act 1995 (NSW). The Eastern Suburbs Banksia Scrub is also protected under the Environmental Protection and Biodiversity Conservation Act 1995.

The Botany Swamps are of regional environmental importance as a major recharge source for the Botany Sands Aquifer. The wetlands also have regional ecological value as native animal habitat and movement corridors, and may include animal species of conservation significance."⁸

More information on the values of these wetlands can be gained by visiting the City of Botany Bay website.⁹ It lists the following Endangered Ecological Communities.

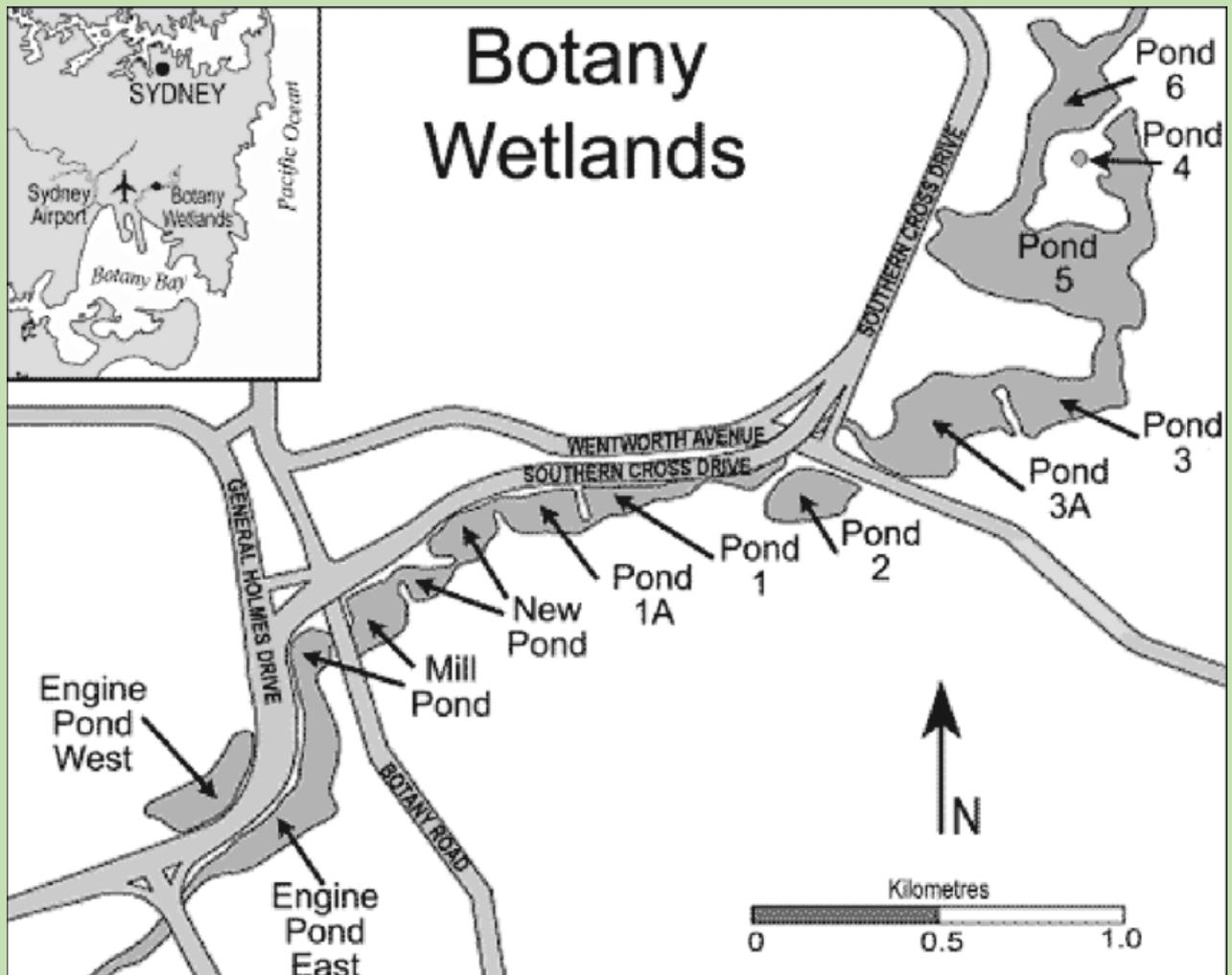
- Sand Based Vegetation Communities
- Bangalay Sand Forest
- Eastern Suburbs Banksia Scrub
- Wetland Vegetation Communities
- Sydney Freshwater Wetlands
- Swamp Sclerophyll Forest on Coastal Floodplains

⁷

https://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq0/~edisp/dd_044106.pdf

⁸ Ibid

⁹ <http://www.botanybay.nsw.gov.au/Our-Environment/Sustainable-Council/Endangered-Ecological-Communities-and-Wetlands>



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Further south the wetlands near where Cooks River and Wolli Creek enter Botany Bay have been all but lost. Rockdale Wetlands run from the Cooks River to Sans Souci and have been identified as critically important habitat for the local declining flora and fauna species. The corridor is surprisingly home to key fish breeding habitat, 7 Endangered Ecological Communities and 28 fauna species listed as threatened or migratory in the area. The parklands also attract birdwatches and nature study groups while also supporting a range of other recreational activities with extensive cycling tracks, sporting fields, tennis courts and playgrounds used by the community.¹¹

There has been a respite from development pressure over the future of the Landing Lights wetlands but that is just a small respite.

The Branch will remain vigilant and ensure that all members are aware of the threats to these important habitats. We cannot afford to lose any more of these precious resources.

¹⁰ https://www.researchgate.net/figure/The-Botany-Wetlands-pond-system-Sydney-NSW-Australia_fig1_267686716

¹¹ <https://bookings.conservationvolunteers.org/project/reviving-rockdale-wetlands> You can get involved in on ground work via this site.