



OUR CONSERVATION STORY

Sungei Buloh

by Nature Society Singapore

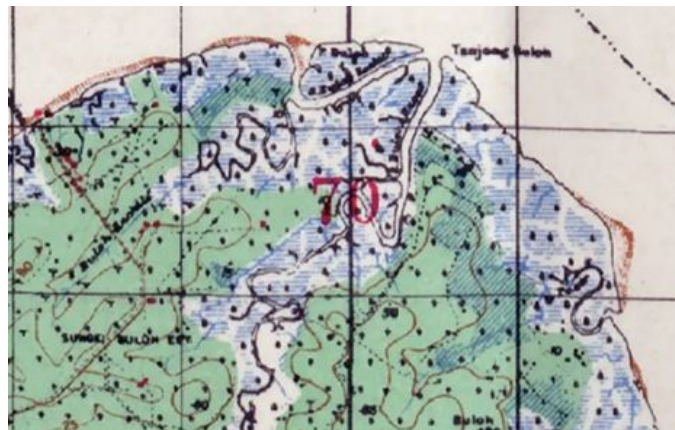
Pre-modernisation

In Malay, Sungei means 'river' while Buloh means 'bamboo'. In the 19th century, Sungei Buloh was largely a mangrove swamp, estimated to be about 457 hectares in area.

It was not until the 1930s that the land was developed for farming uses. By the mid-1980s, many of the mangroves had been cleared for prawn ponds.



Sungei Buloh in the 1873 map of Singapore (Source: <https://libmaps.nus.edu.sg/>)



Sungei Buloh in the 1943 map of Singapore (Source: <https://libmaps.nus.edu.sg/>)



Sungei Buloh in the 1983 map of Singapore (Source: <https://libmaps.nus.edu.sg/>)

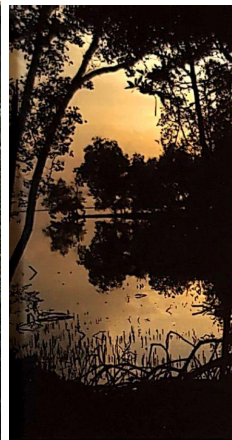
Discovery of Sungei Buloh

In September 1986, Richard Hale studied the map, looking for possible birding areas and located Sungei Buloh. Figuring out how to reach the other side of the sluice gate in the opposite river bank, he navigated through unmarked lanes off Neo Tiew Road and finally reached the prawn and fish ponds, alive with flocks of wading birds, interspersed amongst the mangroves.

Months later, to compare notes he met Christopher Hails, an ornithologist who was working with Parks and Recreation Board, only to find that most birdwatchers did not know the presence of this place. Soon after, it was announced that Sungei Buloh was gazetted for reclamation for high-tech agriculture.



A flock of waders awaiting low tide in a prawn pond in Sungei Buloh. Picture by Jimmy Chew



Mangrove frame sunrise at Sungei Buloh. Picture by Fong Chee Wai

From Backwater to Nature Reserve

Text by **Richard Hale**

2003 marked the 10th Anniversary of Singapore's first nationally protected wetland reserve. Former Nature Society (Singapore) Vice-President Richard Hale played a crucial role in the campaign to preserve Sungei Buloh as a protected migratory wader feeding site. He recounts how the challenge started and succeeded, more than 15 years ago, to create a nature conservation park that will educate and increase environmental awareness.

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and at that stage knew no other birdwatchers here. I studied the map, looked for likely birding areas and set out each weekend to see what I could find.

The Sungei Buloh watershed obviously held promise and my first visit was the one above. I returned several times to the kampong hoping to find some means of getting across to the other side but to no avail. It seemed that anything other than high tide a mud scooter would be more feasible than a boat but there was no such thing around. (For the curious, a mudscooter is a wooden plank with an upright handle attached. You kneel on the board with one knee, holding the handle in both hands and use the other leg to propel the board over the mud. This way only one leg gets muddy.) On these visits, provided I timed the tides right, the waders could be seen flying past in their thousands but if wrong then I had to be content with whatever common kampong birds were around.

Getting to the other side of the river proved to be a challenge and it took several attempts to find the way round and to navigate the maze of unmarked lanes off Neo Tiew Road before I was able to reach the sluice gate which I had seen from the kampong. It was worth the effort. Prawn and fish ponds interspersed with mangrove covered many acres and the flocks of feeding or roosting waders, herons, egrets and others made this a paradise for anyone interested in watching or photographing birds. In my case, photography is usually a triumph of optimism over experience but the hours spent with my telescope and binoculars were a wonderful antidote to the stresses of the week.

Some weeks or months later I met Chris Hails for lunch. He was working with the Government to try to bring back more birdlife to Singapore, the then Prime Minister having wondered why he saw far fewer than in years gone by. Chris and I swapped notes on the best places we knew to birdwatch and I was surprised that he had no knowledge of Sungei Buloh. It later transpired that none of the other members of the Malayan Nature Society

(Singapore Branch), as the Nature Society (Singapore) was then, seemed to know about it but once the word spread all agreed that this was a special place. Similar areas at Serangoon Estuary were now undergoing development, the Society's efforts to save them were repeatedly thwarted.

Out of the blue one day came the news that the Sungei Buloh area was to be re-zoned and reclaimed for high-tech agriculture.

Obviously something had to be done.

There were the pessimists who felt that following the failure at Serangoon nothing could be done but the Bird Group Conservation Committee consisting of Dr Rixon Ngim, R Subharaj, Dr Ho Hua Chew and myself assisted by Clive Briffert and Chris Hails decided to put together a proposal for a nature conservation area. A brochure was prepared, ably illustrated by Sutari Supari and with photographs, plans and listings of the 122 species sighted there.

The rationale for the area was four-pronged. First and foremost it would serve as a centre for education, for field studies in biology, geography and other environmentally-related disciplines. Secondly it would be managed to improve the habitat and so attract more birds and wildlife. Thirdly it would promote the concept of environmental conservation among the public at large and lastly prove to be a tourist attraction to the growing numbers of birdwatchers in Europe and America. As stated in the brochure, the area selected was the last of traditional rural Singapore; a veritable microcosm of cultural and natural history interest.

Our plan of campaign was to send a copy of the brochure to all ministers, permanent secretaries, members of parliament, and other groups, organisations and individuals who might be interested and help our cause. This was done and at the same time all our contacts were asked to talk about this interesting proposal to anyone and everyone they met. A meeting with the Member of Parliament for the area was arranged and he admitted that he

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Stakeholder Engagements

Conversations between Malayan Nature Society (Singapore Branch) and various stakeholders started in March 1987.

MALAYAN NATURE SOCIETY, SINGAPORE BRANCH - BIRD GROUP

Minutes of the Fourth Meeting of the Sungei Buloh Action Committee held at Philosophy Department, National University of Singapore at 5.30 p.m. on Friday 13 March 1987.

Present: Clive Briffet
Chris Hails
Richard Hale
Ho Hua Chew
Rexon Ngim
R. Subharaj

Reports

1. Rexon Ngim reported that he had an interesting meeting with the Director of the Primary Production Department (PPD), D. Ngiam Tong Tsal. The meeting was for the purpose of discussing the MNS - Singapore Branch Seminar on the legal aspects of nature conservation, but in the course of the discussion, D. Ngiam had remarked that the PPD is willing to work closely with the Society towards any project for nature conservation. According to Rexon, the Director's response was on the whole very encouraging.
2. Richard Hale reported that he had also an interesting meeting with the MP for Chua Chu Kang, Mr. Tang Chwee Kim. Richard gave Mr. Tang a briefing on the Sungei Buloh conservation proposal. A copy of the Committee's Fact Sheet, together with some photographs of the birds and sceneries of the area, were also presented to Mr. Tang. According to Richard, Mr. Tang expressed great enthusiasm for the proposal and was happily surprised to learn that there are eagles around the area. He requested that he be kept informed and a copy of the project proposal be given to him when ready.
3. Richard also had a meeting with a group of VIPs from The Straits Times - Mr. Cheng Yip Seng, Mr. Lesley Fong, Mr. Bob Ng, etc. - where he had the opportunity to discourse on the need for conservation of the Sungei Buloh area. However, the response here was not as good as that from the MP of Chua Chu Kang.

Malayan Nature Society, Singapore Branch - Bird Group

Minutes of the Fifth Meeting of the Sungei Buloh Action Committee held at 8, Jalan Buloh Perindu, Singapore 1545, at 8.00 p.m. on 6 April 1987.

Present : Chris Hails
Richard Hale
Ho Hua Chew
R. Subharaj

Present as Guest: Sutari Bin Supari

Absent : Clive Briffet
Rexon Ngim

Reports

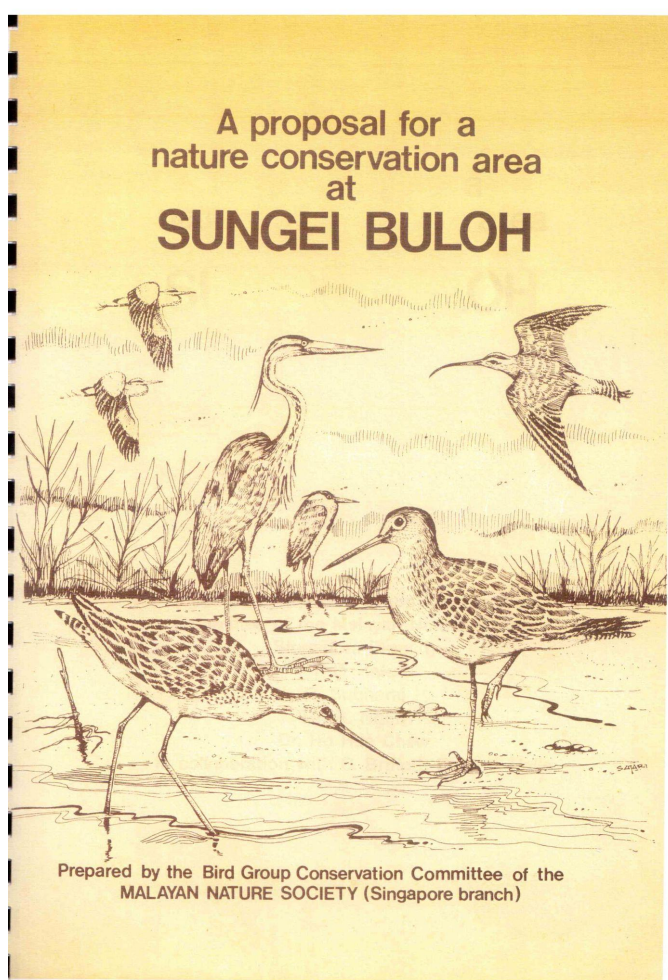
1. Richard Hale reported that Mr. Tang Chwee Kim, the MP for Chua Chu Kang, had brought up the matter of conserving Sungei Buloh to Mr. Dhanabalan, the Acting Minister of National Development. The Acting Minister said that the area would not be subjected to any development for the next three to four years, although it was gazetted for high-tech agriculture. The Acting Minister was keen in making a tour of the area in the immediate future.
2. Richard also reported that he had the opportunity of meeting the President, Mr. Wee Kim Wee, but unfortunately the occasion was not appropriate for him to bring up the subject of Sungei Buloh.
3. Chris Hails reported that he had just received a letter from the Prime Minister, thanking him for the gift of his recently-published book, The Birds of Singapore. In the letter, the Prime Minister expressed his sadness and concern for the extinction of the hornbills from the Water-Catchment Forest, and hoped that these

Meeting minutes of the Sungei Buloh Action Committee by Malayan Nature Society, Singapore Branch, 13 March and 6 April 1987 (Source: Nature Society Singapore)

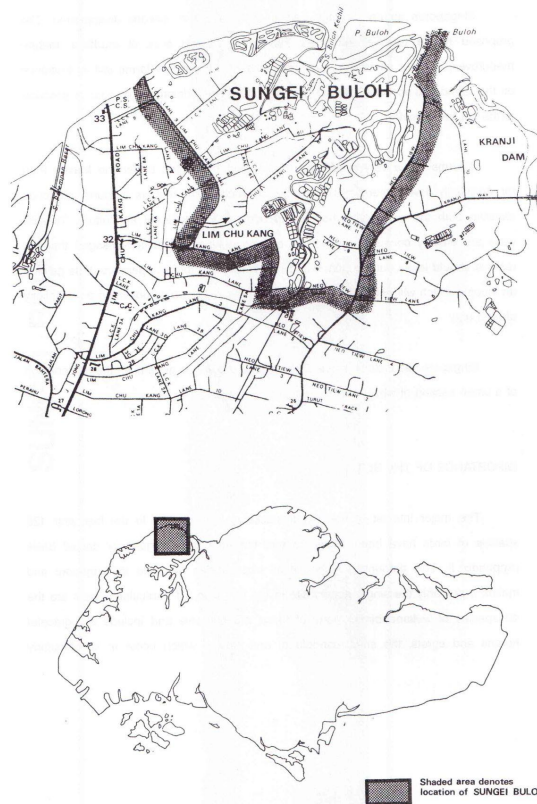
Whilst drafting of the conservation proposal was underway, part of this proposal was informally shared with stakeholders like Primary Production Department, MP for Chua Chu Kang, reporters, and Acting Minister of National Development.

The Conservation Proposal

Despite failed attempts to conserve the Serangoon Estuary¹, surgeon Dr Rexon Ngim, the late conservationist and veteran wildlife consultant R Subharaj (1963-2019), conservationist Dr Ho Hua Chew, past Vice-President of Nature Society Singapore and the CEO of HSBC Singapore Richard Hale, put together a proposal to conserve the 318 hectares of wetland. They were assisted by the founding member of NSS's Bird Group and Director for the Oxfordshire Trust for the Environment Clive Briffett (1943-2011) and Christopher Hails and additionally supported by the bird-sighting lists of the Lim brothers, Lim Kim Keang, Lim Kim Seng and Lim Kim Chuah as well as of Sunny Yeo.



Plan A



Conservation Proposal published in 1987 by R.E Hale, R. Subaraj, Dr. R. Ngim, Dr. Ho Hua Chew, in collaboration with C. Briffett, Dr. C. J. Hails, illustrated by Sutari bin Supari (Source: Nature Society Singapore)

¹ Serangoon estuary was a globally well-known as the most important haven for migratory wading birds in Singapore at that time; and as this haven was in the process of being wiped out for development, there was as sense of urgency among the Society's bird lovers to save Sungei Buloh when it was discovered.

In this proposal submitted in November 1987 and ably illustrated by Sutari bin Supari, the team highlighted the bird species recorded - 126 bird species, or ~42% of all bird species recorded by then in Singapore and making it likely to be the single richest site in Singapore.

APPENDIX I

BIRDS OF SUNGEI BULOH

Grey Heron
Purple Heron
Little Heron
Chinese Pond Heron
Pacific Reef Egret
Chinese Egret
Great Egret
Little Egret
Black-crowned Night-Heron
Yellow Bittern
Cinnamon Bittern
Wigeon
Osprey
Black Baza
Eurasian Honey Buzzard
Black-shouldered Kite
Black Kite
Brahminy Kite
White-bellied Sea-eagle
Japanese Sparrowhawk
Changeable Hawk-eagle
Blue-breasted Quail
Barred Buttonquail
Slaty-breasted Rail
White-browed Crane
White-breasted Waterhen
Watercock
Common Moorhen
Purple Swamphen
Greater Painted-snipe
Lesser Golden Plover
Little Ringed Plover

Ardea cinerea
Ardea purpurea
Butorides striatus
Ardeola bacchus
Egretta sacra
Egretta eulophotes
Egretta alba
Egretta garzetta
Nycticorax nycticorax
Ixobrychus sinensis
Ixobrychus cinnamomeus
Anas penelope
Pandion haliaetus
Aviceda leuphotes
Pernis apivorus
Elanus caeruleus
Milvus migrans
Haliaeetus indus
Haliaeetus leucogaster
Accipiter gularis
Spizaetus cirrhatius
Coturnix chinensis
Turnix suscitator
Rallus striatus
Porzana cinerea
Amaurornis phoenicurus
Gallinula chloropus
Porphyrio porphyrio
Rostratula benghalensis
Pluvialis dominica
Charadrius dubius

Mongolian Plover
Whimbrel
Black-tailed Godwit
Common Redshank
Marsh Sandpiper
Common Greenshank
Wood Sandpiper
Terek Sandpiper
Common Sandpiper
Pintail Snipe
Rufous-necked Stint
Long-toed Stint
Curlew Sandpiper
Broad-billed Sandpiper
White-winged Tern
Black-naped Tern
Little Tern
Great Crested Tern
Lesser Crested Tern
Pink-necked Pigeon
Jambu Fruit-dove
Spotted Dove
Peaceful Dove
Long-tailed Parakeet
Plaintive Cuckoo
Malayan Bronze Cuckoo
Greater Coucal
Lesser Coucal
Collared Scops Owl
Large-tailed Nightjar
Swiftlet spp.
Fork-tailed Swift
House Swift
Asian Palm Swift

Charadrius mongolus
Numenius phaeopus
Limosa limosa
Tringa totanus
Tringa stagnatilis
Tringa nebularia
Tringa glareola
Xenus cinereus
Actitis hypoleucos
Gallinago stenura
Calidris ruficollis
Calidris subminuta
Calidris ferruginea
Limicola falcinellus
Chidonias leucopterus
Sterna sumatrana
Sterna albifrons
Sterna bergii
Sterna bengalensis
Treron vernans
Ptilinopus jambu
Streptopelia chinensis
Geopelia striata
Psittacula longicauda
Cacomantis merulinus
Chrysococcyx minutillus
Centropus sinensis
Centropus bengalensis
Otus bakkamoena
Caprimulgus macrurus
Aerodramus spp.
Apus pacificus
Apus affinis
Cypsiurus balaisiensis

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Grey-rumped Treeswift
Common Kingfisher
Stork-billed Kingfisher
White-throated Kingfisher
Black-capped Kingfisher
Collared Kingfisher
Blue-tailed Bee-eater
Blue-throated Bee-eater
Dollarbird
Rufous Woodpecker
Laced Woodpecker
Common Goldenback
Brown-capped Woodpecker
Sand Martin
Barn Swallow
Pacific Swallow
Red-rumped Swallow
Pied Triller
Ashy Minivet
Common Iora
Yellow-vented Bulbul
Olive-winged Bulbul
Crow-billed Drongo
Black-naped Oriole
House Crow
Large-billed Crow
Abbot's Babbler
Magpie Robin
Flyeater
Arctic Warbler
Great Reed-warbler
Common Tailorbird
Dark-necked Tailorbird
Ashy Tailorbird

Hemiprocne longipennis
Alcedo atthis
Halcyon capensis
Halcyon smyrnensis
Halcyon pileata
Halcyon chloris
Merops philippinus
Merops viridis
Eurystomus orientalis
Celeus brachyurus
Picus vittatus
Dinopium javanense
Picoides moluccensis
Riparia riparia
Hirundo rustica
Hirundo tahitica
Hirundo daurica
Lalage nigra
Pericrocotus divaricatus
Aegithina tiphia
Pycnonotus goiavier
Pycnonotus plumosus
Dicrurus annectans
Oriolus chinensis
Corvus splendens
Corvus macrorhynchos
Trichastoma abbotti
Copsychus saularis
Gerygone sulphurea
Phylloscopus borealis
Acrocephalus orientalis
Orthotomus sutorius
Orthotomus atrogularis
Orthotomus ruficeps

Rufous-tailed Tailorbird
Yellow-bellied Prinia
Zitting Cisticola
Asian Brown Flycatcher
Yellow-rumped Flycatcher
Pied Fantail
Asian Paradise Flycatcher
Mangrove Whistler
Yellow Wagtail
Forest Wagtail
Richard's Pipit
Brown Shrike
Tiger Shrike
Philippine Glossy Starling
Purple-backed Starling
Common Myna
White-vented Myna
Brown-throated Sunbird
Purple-throated Sunbird
Copper-throated Sunbird
Olive-backed Sunbird
Scarlet-backed Flowerpecker
Eurasian Tree Sparrow
Baya Weaver
Javan Munia
Scaly-breasted Munia

Orthotomus sericeus
Prinia flaviventris
Cisticola juncidis
Muscicapra latirostris
Ficedula zanthopygia
Rhipidura javanica
Terpsiphone paradisi
Pachycephala cinerea
Motacilla flava
Dendronanthus indicus
Anthus novaeseelandiae
Lanius cristatus
Lanius tigrinus
Aplonis panayensis
Sturnus sturninus
Acridotheres tristis
Acridotheres javanicus
Anthreptes malacensis
Nectarinia sperata
Nectarinia calcostetha
Nectarinia jugularis
Dicaeum cruentatum
Passer montanus
Ploceus philippinus
Lonchura leucogastroides
Lonchura punctulata

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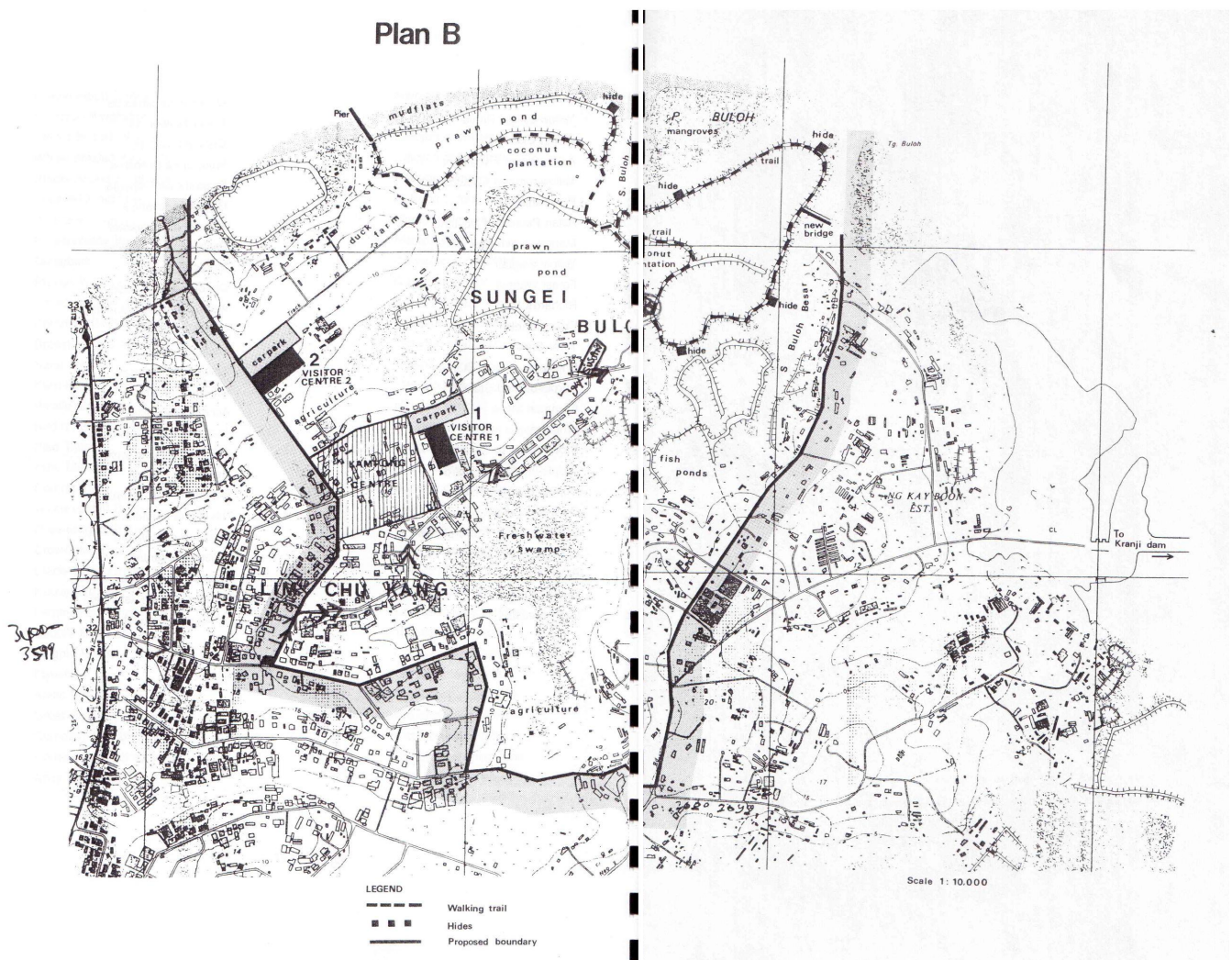
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They surveyed and recorded the habitats present (as seen in the map below) and highlighted the intrinsic benefits of each habitat to in the proposed reserve.

The proposed reserve would provide

1. Broad-based educational facilities for students in biology, geography and other environmentally related disciplines’;
2. Areas of habitat especially managed to increase their attractiveness to the wide variety of flora and fauna already found there and to increase this variety with special emphasis placed on the birdlife;
3. Promotion of the concept of environmental conservation among the general public of Singapore;
4. Ecotourism.

A Kranji Dam Ecological Park between the Kranji dam and the mouth of Sungei Buloh covering an area of 1,350m by 300m was also proposed as a later extension. Today, it is designated as Kranji Coastal Nature Park.



Physical description of the various habitats in Sungei Buloh in the Conservation Proposal (Source: Nature Society Singapore)

Stakeholder Engagements

The group sent a copy of the conservation proposal to ministers, permanent secretaries, members of parliament and anyone who might be interested in the same cause.



The Chairman
The Nature Reserves Board
c/o Parks and Recreation Department
The Botanic Gardens
Cluny Road
Singapore 1025

Dear Sir


We have much pleasure in enclosing 20 copies of "A proposal for a nature conservation area at Sungei Buloh" which has been prepared by a committee of the Bird Group of the Singapore Branch of the Malayan Nature Society.

We shall be most grateful if the Board can consider this and recommend it to the appropriate authorities. We believe that Sungei Buloh is an area of significant ecological importance in Singapore and given that two other major sites have recently been lost to reclamation, feel it imperative that this one is not lost to future generations of Singaporeans.

This proposal is the successor to Mr Clive Briffett's proposal regarding the mangrove area at Kranji Dam referred to in your letter to him dated 10 July 1986 (Your Ref : NRB/07).

Yours faithfully


.....
DR REXON NGIM


.....
R E HALE

A summary of the conservation proposal was also published by the Straits Times, expressing the concerns of the loss of habitats, thereby losing our biodiversity.



The Straits Times, 14 December 1987 (Source: NewspaperSG)

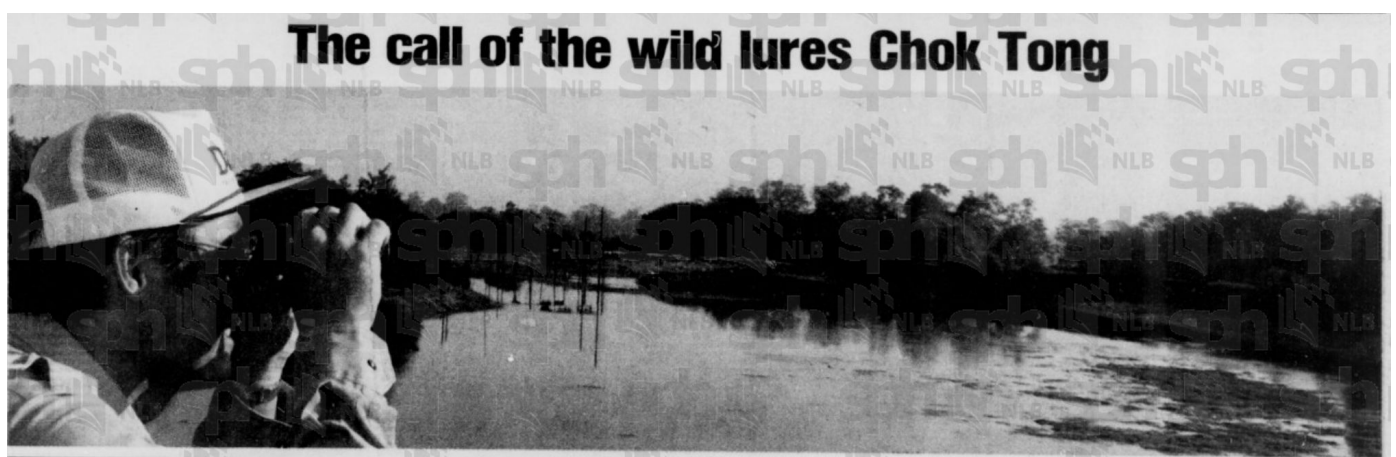
They brought many members of the public out to the area to experience for themselves the value of Sungei Buloh. Interested parties included the then-president, Dr Wee Kim Wee, then-minister for Foreign Affairs and National Development S. Dhanabalan and then-Deputy Prime Minister Goh Chok Tong.



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Walks led by Dr Rexon Ngim, Dr Ho Hua Chew, Mr Richard Hale and Mr Subaraj (Source: Nature Society Singapore)



The Straits Times, 19 February 1989 (Source: NewspaperSG)

Outcome

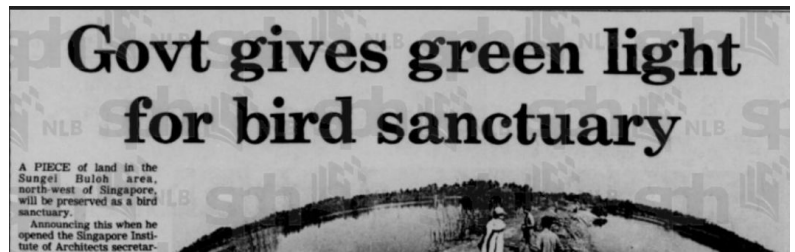
On 19 February 1988, it was announced that 85 hectares would be set aside as a bird sanctuary.

In 1989, this 85 hectares were designated as the new Sungei Buloh Nature Park. Whilst all other then-existing nature parks had been gazetted by the British colonial government, it is historic to have Sungei Buloh to be put for nature conservation.

Essential efforts were made to help stakeholders understand that a bird sanctuary is not the same as a public park, nor Jurong Bird Park where birds are in captivity for viewing. This bird sanctuary is primarily meant for the study of birds *in situ*, their habits and other botanical and ecological studies. It was officially opened on 6

December 1993 as the Sungei Buloh Nature Park. It was also gazetted as a Nature Reserve on 1 January 2002.

By 2003, Sungei Buloh Wetland Reserve was the remaining bygone agricultural era and of the places lost to development such as Senoko estuary, Jurong, Punggol and Serangoon estuary. More nationally threatened species have also been sighted, making Sungei Buloh an important national refuge for these birds that are not found in the other 3 nature reserves. What is most interesting currently is that the conserved area which was at the time of discovery a very open habitat, consisting mainly of ponds and bunds and mudflats with a scarcity of vegetation, has also become to a substantial extent a lush mangrove habitat, enhancing its biodiversity. It is now also a haven or refuge for many mangrove and some forest species that are nationally threatened, such the Estuarine Crocodile, Black-and- Red Broadbill, Lesser Adjutant Stork, Shore Pit-Viper, Buffy Fish Owl, King Cobra, etc. Together with Bukit Timah Nature Reserve, Central Catchment Nature Reserve and Labrador Park, Sungei Buloh Wetland Reserve is a refuge for 45 of the 55 species (or 82%) of our nationally threatened bird species.



The Straits Times, 19 February 1988 (Source: NewspaperSG)

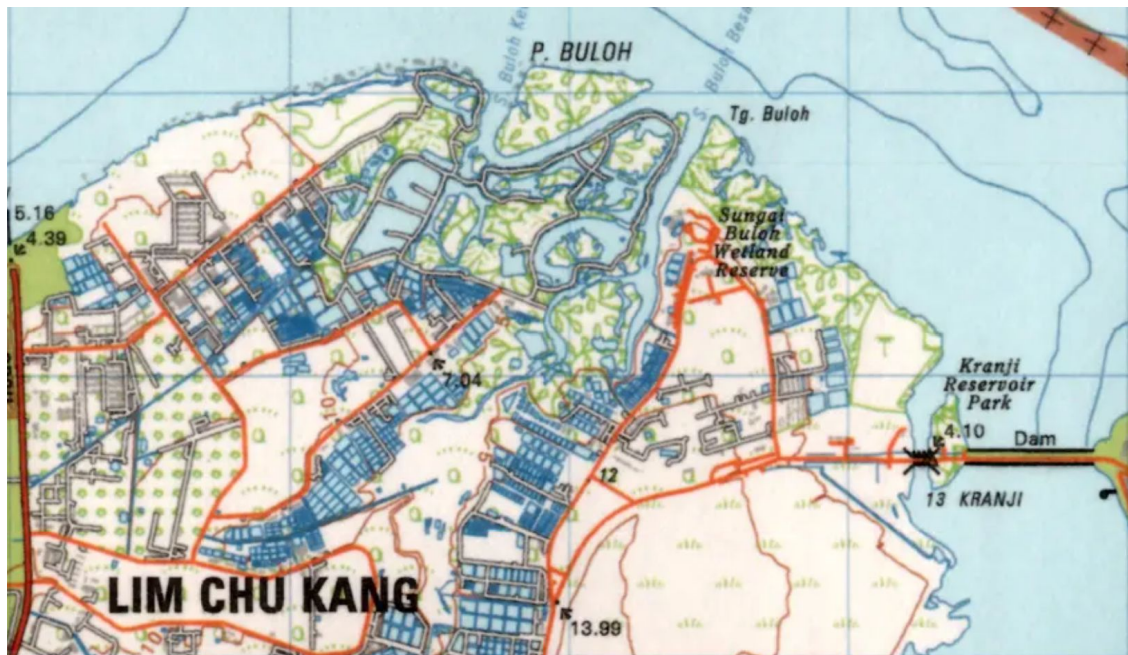


Sungei Buloh in the 1993 map of Singapore (Source: <https://libmaps.nus.edu.sg/>)

Sungei Buloh Today

Today, the Sungei Buloh Wetland Reserve presently spans 202 ha of mangrove swamp, mudflats, ponds and rainforest along the northwestern shore of Singapore. Sungei Buloh Wetland Reserve has also been recognized as one of the three Important Biodiversity Areas by Birdlife International as part of the Kranji-Mandai IBA, for its significance for the international conservation of bird populations and to secure the long-term conservation of these areas that are significant to birds and biodiversity.

In 2020, the 400-hectares Sungei Buloh Park Network to include Sungei Buloh Wetlands Reserve to expand Singapore's nature capital.



Sungei Buloh in the 2010 map of Singapore (Source: <https://libmaps.nus.edu.sg/>)