TEBET ECO PARK

“Connecting People with Nature”

Jakarta is a fast-growing 11-million population city with complex urban fabrics. It has multifaceted citizen that need public spaces with designated communal purposes to interact and thrive as a society, transcending cultural, economic, and social barriers. Formerly, Tebet park was once a public park with many problems: a waste dumping site, polluted waterway with frequent flooding, and slums area. From many efforts to reinvigorate Jakarta’s public space, Tebet Eco Park stands out the most successful measures of park revitalization, which awarded as The Best Park in Indonesia from The Adipura Awards in 2023. This public park has set an example that will continue to inspire more resilient and impactful urban regeneration projects to come.

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“Connecting People With Nature”

PROJECT NARRATIVE

Tebet Eco Park is a 7-hectare public park revitalization project located in South Jakarta with focuses on an active regeneration of the site’s ecology with tree conservation and enhancing the blue green infrastructure. The ecological landscape design approach reduces the risk of flooding with river re-naturalization. The result of this new urban regeneration cultivates an inclusive environment that facilitates access to a wide offering of recreational activities in a natural setting. This is the first private-public collaboration project that involves multi government agencies and multi-disciplinary consultant in Jakarta that focus to give a positive impact on the natural environment and public’s wellbeing.

RENATURALIZED WATERWAY

The existing 714m channelized e canal which was polluted due to unfiltered stormwater runoff. During high storm events, the park is frequently flooded as climate change drastically effects the precipitation, but the drainage system capacity remains inadequate. A key strategy to ensuring the waterways are appropriately designed through nature-based system to improve the hydraulic performance. The once highly polluted canal is now revitalized into an active waterway with climate-adaptive approach. The ecologically restored river, planted with riparian vegetation that improve water quality by filtering and cleansing surrounding run-off and enhancing the site’s biodiversity. A wide and meandering waterway increase hydraulic capacity, provide resilient floodplain, and bring the diverse native river ecosystem back to the park.

SUSTAINABLE CONSTRUCTION

Over 1500 existing trees were surveyed for the health and value assessment. The landscape design intervention is kept as minimal possible, preserving the valuable trees while also sustaining the natural resources of the site. The excavated materials such as the canal's rubble stone, tree trunk was reused and upcycled as part of the new park construction and feature which involve local carpenter. The unhealthy trees were either relocated to a new location or reused as part of the park’s furniture and playground structures. This approach minimizes the carbon emission due to transportation and speed up the construction time.

ACTIVE COMMUNITY PROGRAM

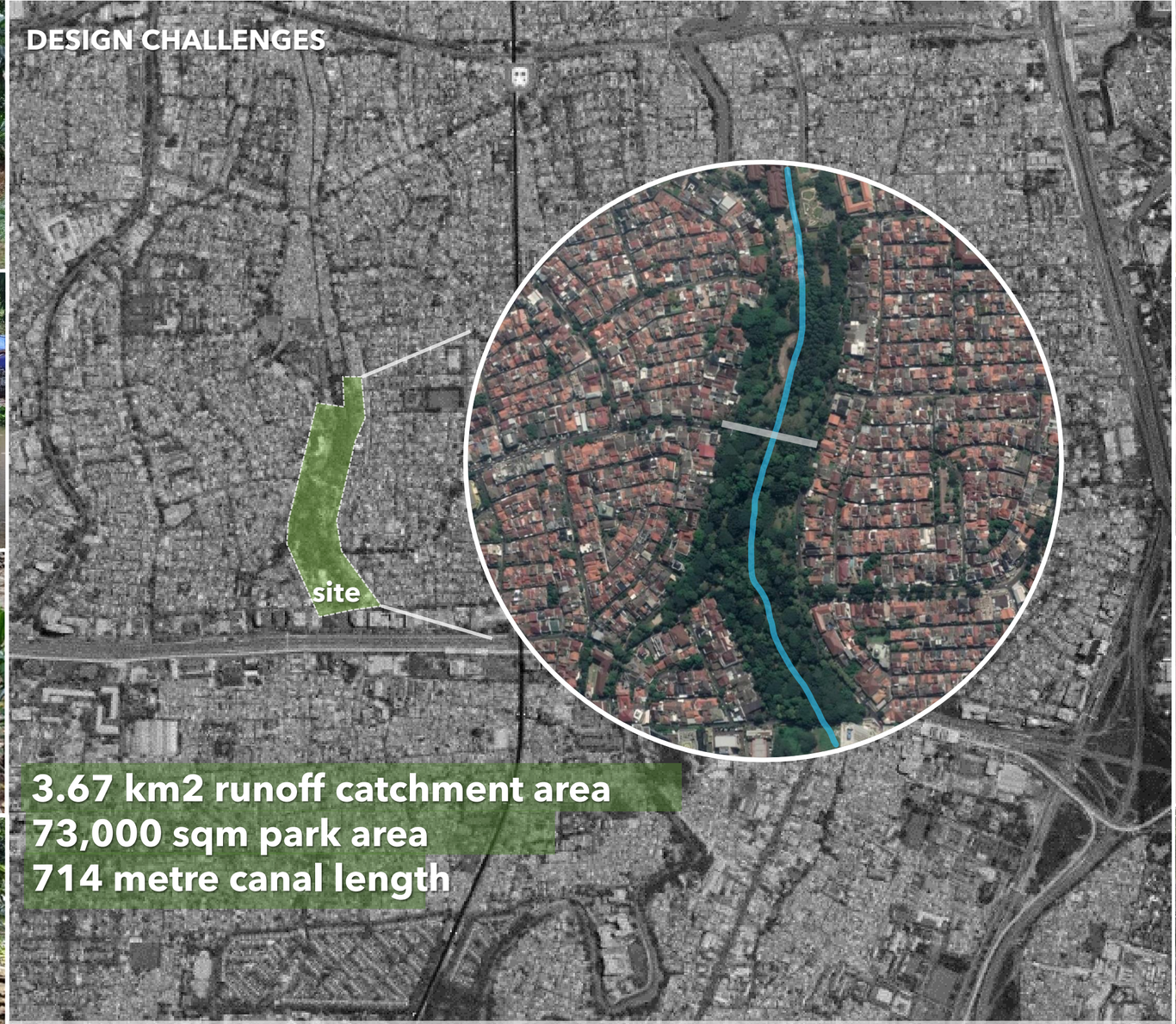
This collaborative approach together with the involvement of local communities and stakeholders for an innovation-driven and co-creation that formulate the project’s goal. The active and passive space provides a wide range of recreational, educational and social activities for the community. The revitalized blue-green open space is accessible by people from all ages and background, a park that truly provide social wellbeing for the local community.

ENHANCED CONNECTIVITY

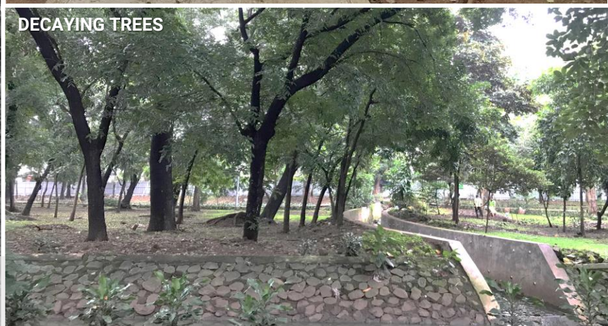
The initial park was divided by the river and busy traffic road segregating the pedestrian connectivity. As a public park, an inclusive connectivity and accessibility for all people is essential. The infinity-shaped pedestrian bridge was designed to encounter the pedestrian connectivity as a seamless pathway. The striking color and meandering bridge were designed to avoid the existing trees and ensure minimum impact to the existing environment, inviting park users to explore the four sides of the park.

Tebet Eco Park has become the catalyst of public park regeneration project in Jakarta that integrate the ecological landscape and recreational space seamlessly, providing a greater equity in the city, an ecosystem where human and nature can coalesce.

DESIGN CHALLENGES



3.67 km2 runoff catchment area
73,000 sqm park area
714 metre canal length

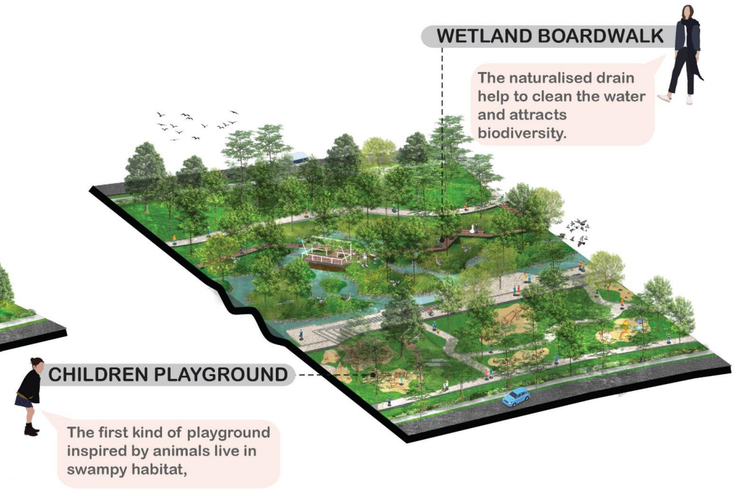


The pre-existing Tebet Park suffered from issues such as inadequate infrastructure, poor connectivity and flooding, largely as a result of its location being bisected by both major roads and a concrete canal.

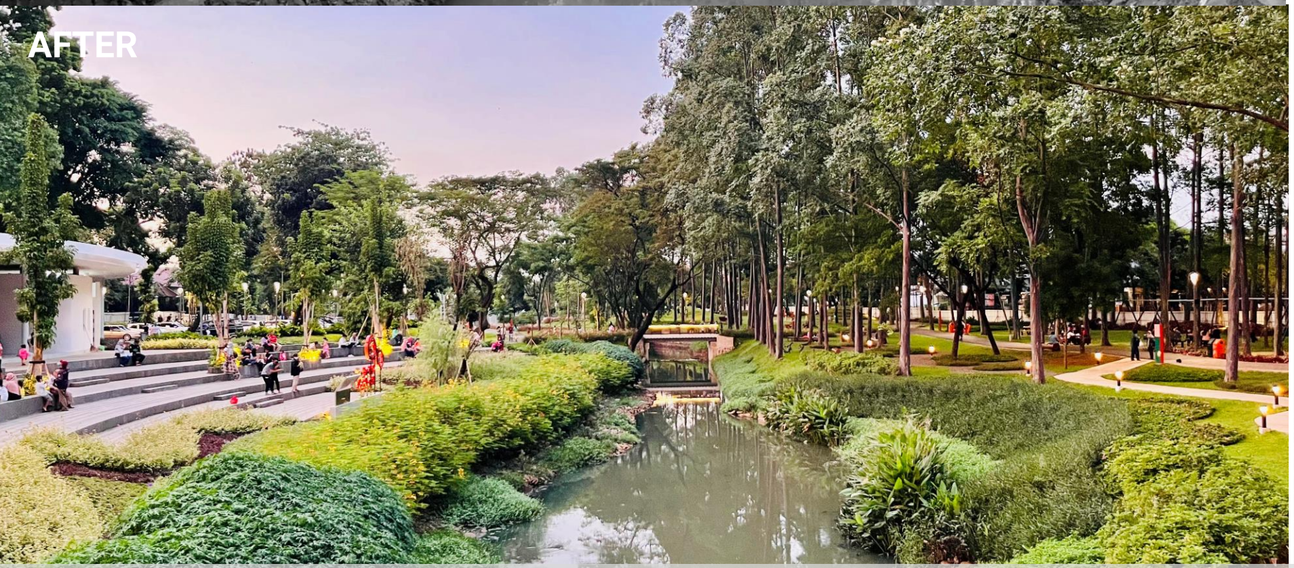
SITE PLAN

NORTH PARK

SOUTH PARK



The landscape architecture seamlessly integrate the waterway, greenery, facilities and recreational program that responds to the site's specific character balancing between the nature rejuvenation and community activity needs.



The once severely polluted canal, stretching over a distance of 714 meters, has undergone a transformation into a flourishing natural waterway. This has been achieved through the construction of a soil bioengineering system, which has greatly improved the water ecology.

BRING PEOPLE CLOSE TO WATER

The soil bioengineering embankment, engineered as an ecologically restored river is embellished with riparian vegetation that enhance the natural aesthetic appeal of the riverbank and entice people toward the waterway

STRENGTHEN SITE GENIUS LOCI

The restored waterway amplifies its fluid dynamism through its expansive floodplain terrain while rejuvenating the park's riverine ecology with diverse native plants, relished by pedestrians traversing the bridge.

The park's blue-green infrastructure is boldly integrated within the park, capturing the stormwater runoff from the surrounding residential, filtering it, slowing it down and retaining it to ease flooding and pollution downstream. The hydraulic stormwater retention capacity was doubled from the original while the flood plain become the flexible community space during dry event.

The wetland islands was built as an effective filtration and detention system for stormwater runoff to easing the park flooding while integrated with diverse array of riparian planting species to enhance aquatic ecosystems.

The constructed wetland planned as a designated surface runoff retention and flood plain area with diverse riparian planting to enhance aquatic and terrestrial habitats. All the existing concrete drain is re-constructed as a series of vegetated swales using recycled construction material from existing canal.

WETLAND BOARDWALK

The Wetland Boardwalk is built with light construction, designed at elevation above 10 years average rainfall event, allowing pedestrian to walk through the park in wet and dry time

REGENERATIVE DESIGN

100+

Affected existing trees transplanted

Affected Trees

Stored for transplant

Transplanted trees within park

Transplanted Trees

100%

Wood logs upcycled for furniture and park furnishing

Hardwood Logs from unhealthy trees

Involved local wood craftmans

Upcycled into furniture & playground features

Nature-Based Material Furniture

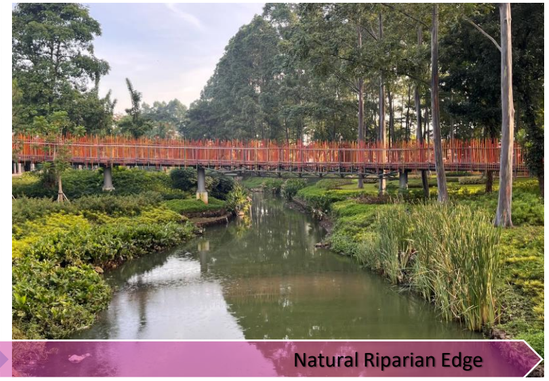
100%

Concrete & Stone rubble re-used for bio-engineering

Stone rubble from existing canal

Reused as bio-engineering material

Upcycled for constructed wetland



Natural Riparian Edge

The existing site's excavated materials, such as the rubble stones, concrete, tree logs were reused as part of the construction materials and furniture, minimizing the carbon impact by giving a second life of the materials.

SUSTAINABLE MATERIAL RECYCLE

The trees that were felled due to development impact or unhealthy condition are reused as site furniture and play structures embraced by the local community.

A BLUE-GREEN SANCTUARY

The urban regeneration of Tebet Eco Park has successfully weaved the blue-green infrastructure into the city fabric while still accommodating thematic recreational spaces in the densely populated neighborhood area. The arrival pavilion and plaza is curated as welcoming plaza that provide the first glimpse of the green sanctuary with the original Eucalyptus trees grove view.

COMMUNITY PLAZA

The Entry Pavilion with tiered plaza serves as a social area suitable for impromptu group activities such as yoga or street performance, as well as other casual gatherings.

COMMUNITY LAWN

A minimal design intervention at the open lawn area, featuring sculpted terrace mounding, transformed the outdoor space into an inviting and flexible area that facilitates spontaneous community activities

CHILDREN'S GARDEN

Jakarta city have been lacking recreational space for children. The Children's Playground is a custom-designed play structure by the landscape architects act as the core recreational place for children to play and explore. The play area is seamlessly integrated with the existing landscape and topography with seatings and platforms provided adequately for the parents to interact.

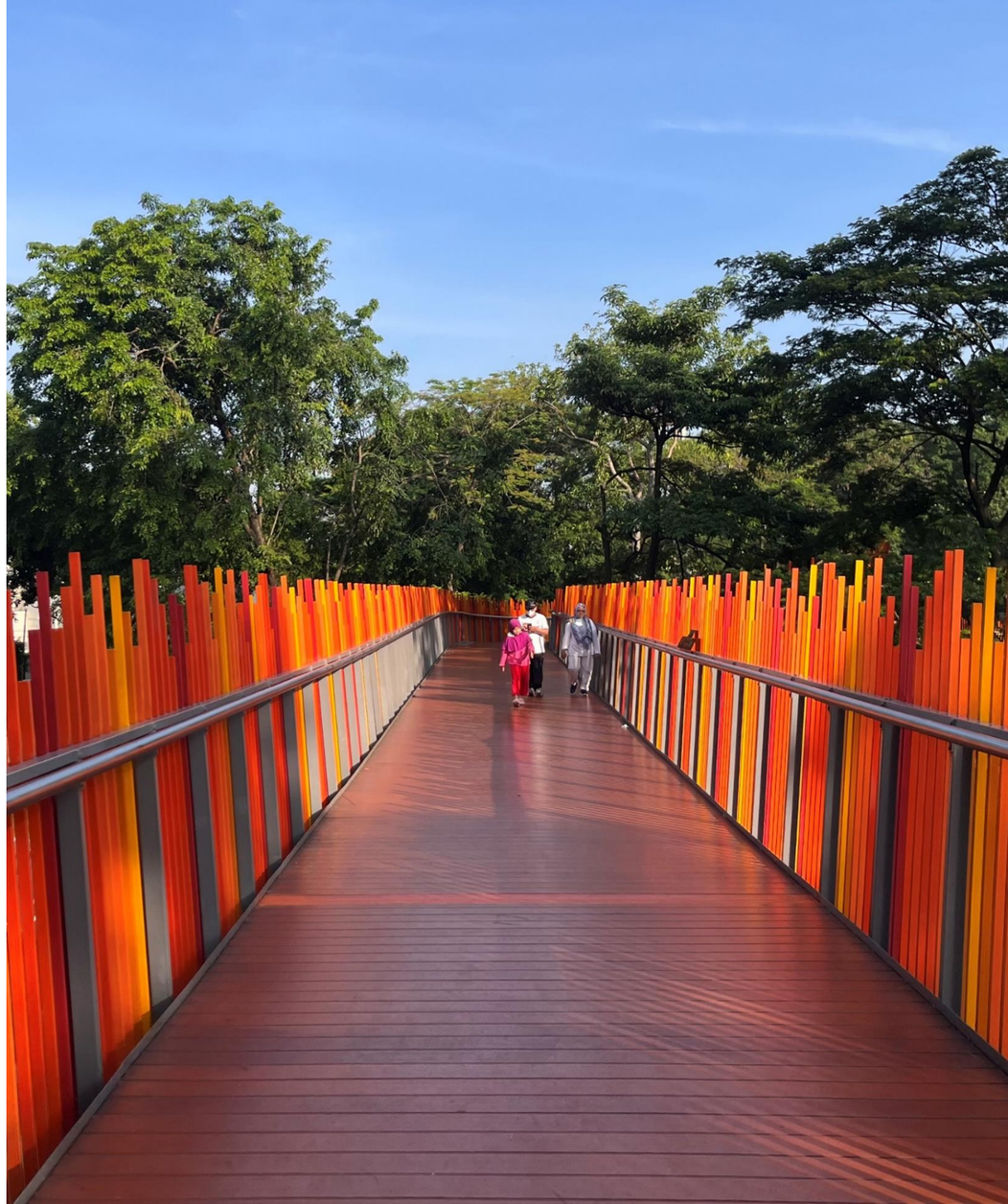
DESIGN FOR ALL AGES AND BACKGROUND

The active and passive spaces was throughly designed to incorporate various recreational and social zones that could be used by different age-groups, and for diverse activity-spectrum that allow park users to experience.

THE LINK BRIDGE

The sinious elevated link bridge serves as an enchanting pathway, ascending and meandering around the established trees, effectively linking the previously disconnected parklands.

Ramping up amidst the rejuvenated greenery and renaturalized waterway, the link bridge offers an invigorating walk that can be effortlessly enjoyed by all pedestrians, providing barrier-free accessibility



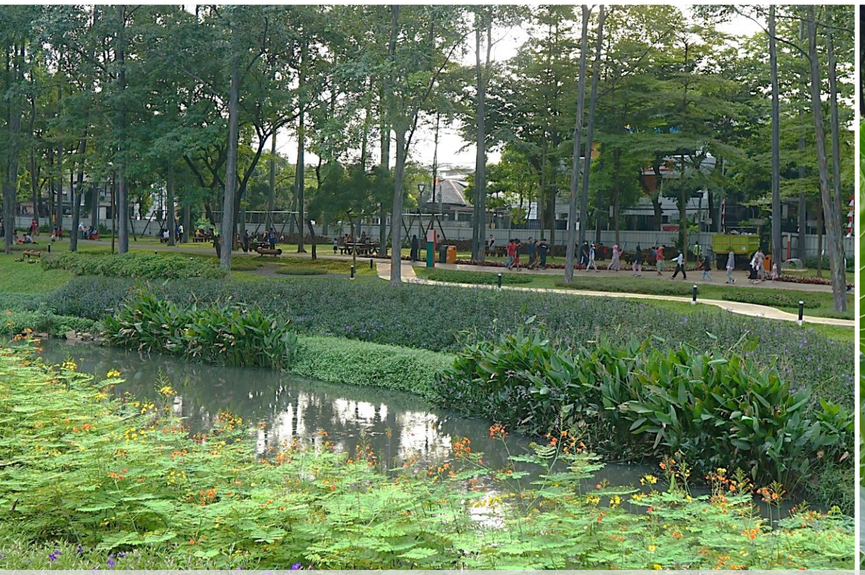
NIGHT EXPERIENCE

Before the revitalization, the park was avoided at night-time due to safety concern. The park illumination has been designed to enhance the sense of safety, tranquility and enchanting ambiance for the surrounding during nocturnal hours.

ENHANCED BIODIVERSITY

TREE PLANTING LIST

1. *Samanea saman*
2. *Tabebuia aurea*
3. *Khaya senegalensis*
4. *Swietenia mahogani*
5. *Delonix regia*
6. *Artocarpus heterophyllus*
7. *Swietenia macrophylla*
8. *Gliricidium sepium*
9. *Khaya anthotheca*
10. *Morinda citrifolia*
11. *Polyalthea longifolia*
12. *Antidesma bunius*
13. *Ficus callosa*
14. *Pithecolobium dulce*
15. *Mimusops elengi*
16. *Mangifera foetida*
17. *Chrysophyllum caimito*
18. *Acacia auriculiformis*
19. *Syzigium oleina*
20. *Mangifera indica*
21. *Nephelium lappaceum*
22. *Avverhoa carambola*
23. *Syzygium polyanthum*
24. *Diospyros celebica*
25. *Ficus racemosa*
26. *Tabebuia argentea*
27. *Alstonia scholaris*
28. *Eucalyptus deglupta*
29. *Bauhinia purpurea*
30. *Terminalia mantaly*
31. *Syzigium aqueum*
32. *Gnetum gnemon*
33. *Pterocarpus indicus*
34. *Tamarindus indica*
35. *Cerbera manghas*
36. *Torreya nucifera*
37. *Stelechocarpus burahol*
38. *Manilkara kauki*
39. *Calophyllum inophylum*
40. *Handroanthus chrysotrichus*
41. *Melia azedarach*
42. *Dimocapus longan*
43. *Archidendron grandiflorum*
44. *Persea americana*
45. *Solanum dyphium*
46. *Mussaenda pubescens*
47. *Casuarina equisetifolia*
48. *Morinda citrifolia*
49. *Annona squamosa*
50. *Theobroma cacao*
51. *Petrea volubilis*
52. *Gmelina arborea*
53. *Bougainvillae spectabilis*
54. *Ceiba pentandra*
55. *Hura crepitans*
56. *Shorea sp.*
57. *Cassia fistula*
58. *Canarium commune*
59. *Aleurites moluccana*
60. *Lepisanthes amoena*
61. *Annona muricata*
62. *Pterospermum javanicum*
63. *Antidesma bunius*
64. *Adenanthera pavonia*
65. *Canarium commune*
66. *Averrhoa bilimbi*
67. *Ficus benjamina*
68. *Lepisanthes amoena*
69. *Pterospermum javanicum*
70. *Terminalia catappa*
71. *Ceberra odolam*
72. *Tabebuia chrysanta*
73. *Plumeria sp.*
74. *Pometia pinnata*
75. *Alstonia scholaris*
76. *Salix babylonica*
77. *Barringtonia racemosa*
78. *Melaleuca cajuputi*
79. *Pandanus utilis*
80. *Spatodhea campanulata*
81. *Cordia sebestana*
82. *Melaleuca leucandendra*
83. *Samanea saman*
84. *Delonix regia*
85. *Tabebuia rosea*
86. *Lagestroemis speciosa*



SHRUB PLANTING LIST

1. *Acalypha wilkesiana*
2. *Acrostichum aureum*
3. *Aglaia odorata*
4. *Alocasia machorizza*
5. *Alpinia purpurata*
6. *Angelonia biflora*
7. *Anthurium andreanum*
8. *Arundina graminfolia*
9. *Arundo donax var. Versicolor*
10. *Asplenium nidus*
11. *Axonopus compressus*
12. *Axonopus compressus "dwarft"*
13. *Bambusa vulgaris*
14. *Bauhinia coccinea*
15. *Blechnum gibbum*
16. *Breynia nivosa*
17. *Brunfelsia pauciflora*
18. *Caesalpinia pulcherrima*
19. *Calathea loseneri*
20. *Calathea loseneri 'pink'*
21. *Canna generalis*
22. *Cnidocolous chayamansa*
23. *Colocasia esculenta*
24. *Costus osae*
25. *Costus spicatus*
26. *Crinum asiaticum*
27. *Crossandra infundibuliformis*
28. *Cuphea hyssopifolia putih*
29. *Cymbopogon citratus*
30. *Cynodon dactylon*
31. *Cyperus alternifolius*
32. *Echinodorus palefollus*
33. *Epipremnum pinnatum*
34. *Hedychium coronarium*
35. *Heliconia caribaea*
36. *Heliconia psittacorum*
37. *Hibiscus rosa sinensis*
38. *Holmskoiddia sanguine*
39. *Homalomena rubescens*
40. *Hymenocallis litoralis*
41. *Hymenocallis speciosa*
42. *Ixora chinensis*
43. *Ixora coccinea*
44. *Ixora javanica 'pink'*
45. *Lantana orange*
46. *Lantana pink*
47. *Licuala grandis*
48. *Monstera deliciosa*
49. *Medinilla magnifica*
50. *Neomarica longifolia*
51. *Nephrolephis exaltata*
52. *Nephrolepis bisserata*
53. *Ophiopogon jaburan*
54. *Osmoxylon lineare*
55. *Pandanus amaryllifolius*
56. *Pennisetum alupecuroides,*
57. *Pennisetum setaceum rubrum*
58. *Philodendrom selloum*
59. *Philodendron burle-marxii*
60. *Philodendron marble*
61. *Phyllanthus myrtifolius*
62. *Platycerium bifurcatum*
63. *Polyscias fruticosa*
64. *Pontederia cordata*
65. *Proiphys amboiensis*
66. *Pteris ensiformis 'victoriae'*
67. *Quisqualis indica*
68. *Ravenala madagascar*
69. *Rhapis excelsa*
70. *Rhynchostylis retusa*
71. *Ruellia simplex*
72. *Ruellia tweediana*
73. *Sacharum officinale*
74. *Schefflera arboricola*
75. *Spathiphyllum walisii*
76. *Spathoglottis plicata*
77. *Syngonium podophyllum*
78. *Tabernaemontana divaricata*
79. *Tecomaria orange*
80. *Thalia delbata*
81. *Thevetia peruviana*
82. *Thunbergia mysorensis*
83. *Tibouchina grandiflora*
84. *Tradescantia zebrina*
85. *Typha angustifolia*
86. *Typhonodorum lindeyanum*
87. *Vernonia elliptica*
88. *Vetiveria zizanoides*
89. *Wedelia trilobata*
90. *Xanthosthemon*

The use of large variety of plant species is sensitively located to create subliminally elegant spaces and seamless experience for park user. The existing canopy trees is complemented with new native plants, including shrubs, grasses, flowers and understory trees to increase the biodiversity of riparian, grasses, open shrubsland and forest habitats.


2020
2022
“CONNECTING PEOPLE WITH NATURE”
Water is not a burden,
it’s a resource to be
cherished, and celebrated.