

## **TK STUDIO CO., LTD.**

Based in Bangkok, Thailand, TK Studio Co. Ltd. specializes in landscape design, passionate in delivering natural landscape that creates resilient habitats, aiming to minimize environmental impacts and advocating sustainability in design. In order to foster healthy ecosystems, the firm believes that humans and other living species must be equally considered in the design process, resulting in a variety of landscape functions which TK Studio refers as Productive Landscape. It is a functioning landscape design that enhances human wellbeing, where landscape performs as infrastructure, provides production and mental healing power, and be flexible for both human activities and resilient design. At the same time, TK Studio pursues the practice of establishing ecosystem services in landscape projects, which eventually will bolster a sustainable growth, balancing social, economic and environmental developments.

TK Studio challenges itself in design excellence when starting with each project, we always values the comments from our staff and combines fresh ideas with core fundamental principles in order to develop the best design solutions for our clients. The firm's greatest strength is its people—with the consolidated bonding and teamwork. TK Studio gathers a group of staff with different expertise, from landscape architects to technicians, in-house artist, horticulturists and research & development that contribute thoughts and ideas throughout the design process, from conception to construction.



For more information on TK Studio Co. Ltd., please visit <http://tkstudio.co.th/>

## **FOUNDER & MANAGING DIRECTOR – TAWATCHAI KOBKAIKIT**

Following the graduation of his Bachelor's degree from the Department of Landscape Architecture at Chulalongkorn University in 1991, Tawatchai then accomplished his Master's degree in Landscape Architecture from the University of Illinois at Urbana-Champaign in 1996. He returned to Chulalongkorn University as a lecturer from 1996 to 2000, and later returned to the US to work for the architecture firm NBBJ in Columbus, Ohio during 2000 and 2001. From 2001 to 2005, Tawatchai worked as a landscape architect for the SWA Group in Dallas, Texas. In 2005, he has settled in Bangkok to establish his own landscape practice and is now the Founder & Managing Director of TK Studio.

Tawatchai has extensive experience in landscape architecture both in Thailand and overseas. His design philosophy lies in the environmental concerns, arts and cultures from which they have emerged. When commencing a project, Tawatchai always look into natural processes within and surrounding the site by conducting thorough cross-professional analysis to ensure the landscape design will blend well and be part of nature. He advocates the application of Productive Landscape in delivering functioning landscape design. Users comfort and experiences, ecosystem services, landscape resilience, capture of seasonal changes and less softscape maintenance are major concerns when he delivers landscape projects. In order to ensure the design responses well to the site, Tawatchai always works with his team to explore the design alternatives through research, using new software, hand sketches, building physical models, and sometimes even testing details with 1:1 models on site. Hence, all landscape design delivered by Tawatchai are functional, lively, and be able to co-exist with nature well. In addition, the signature design of Miyawaki Eco Forest planting has stimulated the natural forest-like design at TK Studio, and the number of eco forest saplings planted is rocketing by each year.



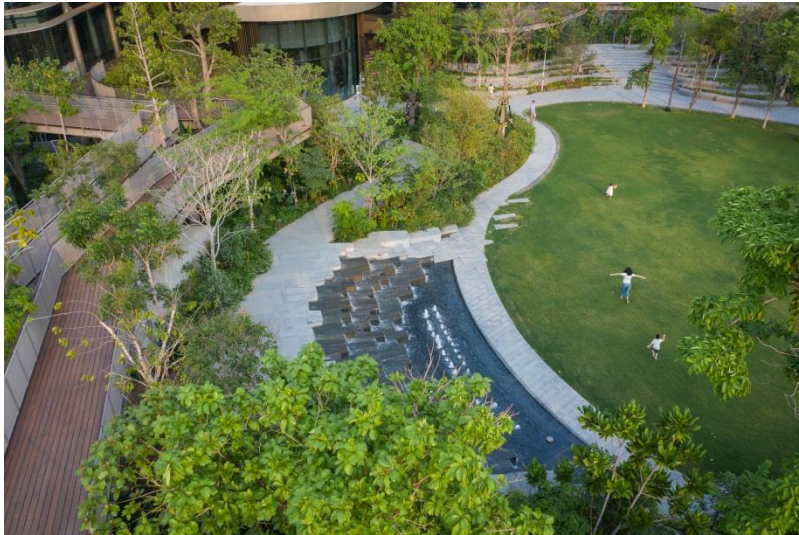
The highlighted projects below are some of the outstanding projects by TK Studio in recent years, which show a diversity of project types and variation of project scales.

## FOREST PAVILION, THE FORESTIAS, Samut Prakan, Thailand, 2018-2020



Forest Pavilion masterplan

The Forest Pavilion is the entrance gateway and sales gallery of The Forestias, which is one of the largest mixed-use developments in Thailand of 64 hectares with a 5 hectares central forest. The project features 5m-tall waterfall, reflecting pond, stepped water feature, event lawn, amphitheater, nature walk and skywalks. The site is relatively flat with clayey and poor drain soil; several design measures have been applied.



Stepped water feature and event lawn

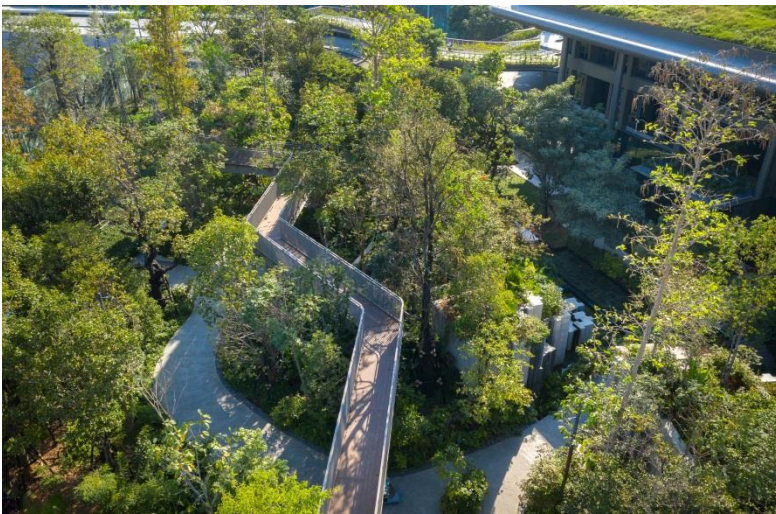


Event lawn and amphitheater

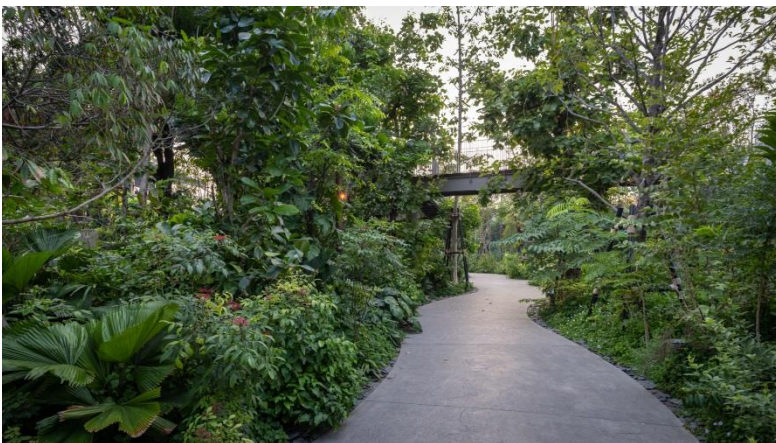
The sales gallery blends Thai style pavilion and butterfly roof structure to symbolize mixture of culture and nature. The landscape design concept is to gradually transform the rigid form of architectural grid into the natural freeform of the central forest. Dense vegetation has been planted along the site boundary to create a visual buffer for the best exclusivity.



Stepped water feature at Forest Pavilion



Skywalk along tree canopy



Refreshing nature walk with eco forest planting

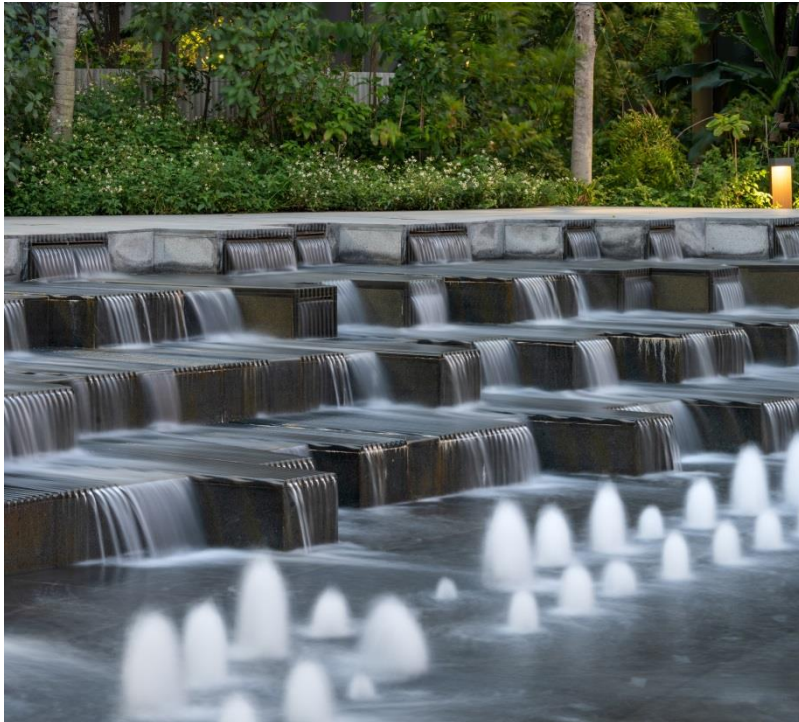
Visual effect has been carefully studied to ensure variety of forest scenes. Moreover, the 5-meter tall waterfall feature creates a pleasant backdrop for the show units, resulting tranquil picturesque landscape. The signature trapezium stone units will be stacked and arrayed for seating areas, paths, and stepped water feature, as the steps gradually scatter, creating the illusion of water splashes on the event lawn.



5m-tall waterfall feature and reflecting ponds



5m-tall waterfall feature and reflecting ponds



Stepped water feature and small fountain jets



Stepped water feature as waterplay area

A series of international standards of SITES, WELL, and LEED have been implemented. Visitors will enjoy a refreshing experience of living with nature among the urban fabric, which integrated sustainable design with high quality modern lifestyle. Green and blue spaces, including lawn, forest, detention pond, and water features are all located within 100 meters walking distance from the Forest Pavilion building and are accessible to all regular building occupants during open hours of the space.

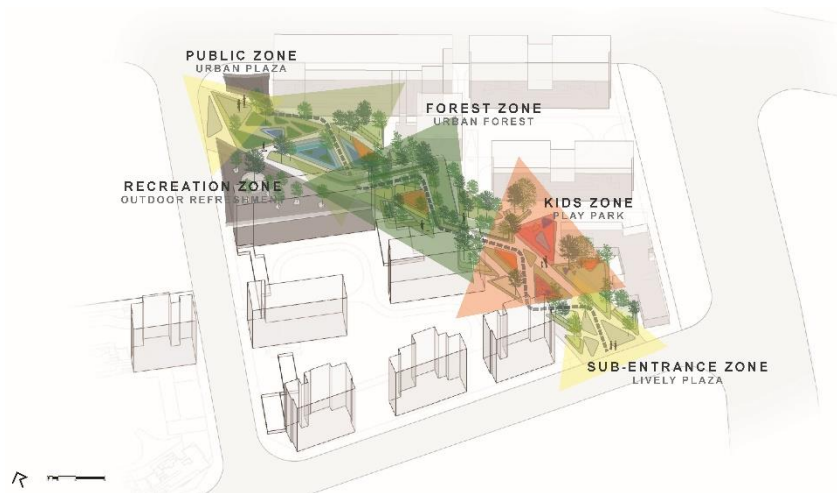
## PARK BLOCK, Ningbo, China, 2019-2020 (Phase 1); Present (Phase 2)

- Gold Prize, Yuan Ye Award 2020



Park Block masterplan

Park Block is intended to reflect the origin of the living environment and introduce the most comfortable living landscape. The triangular geometry provides design opportunity to effectively deal with the irregular shape of land—to utilize all corner space between buildings, enhance the efficiency of circulation, and provide more opportunities to enjoy and interact with the landscape. The landscape in Park Block can be divided into three major zones with distinct characters—Public & Recreation Zone, Forest Zone, and Kids & Sub Entrance Zone.



Zoning diagram





Entrance and sales gallery building



Sales gallery and reflective water feature

Since the landscape is set as the main axis of circulation among the residential buildings, the landscape concept of “Connect with Natural Corridor” is used. The triangular symbol represents mountains in nature, which is the origin of the natural elements, giving flows to the water, climate and vegetation connecting to the living of the lower ground. Park Block has been designed to link with this natural environment and connect modern living back to the origin of nature.



Water feature and triangular berms



Multifunctional triangular berms



Play area

Park Block provides highly accessible facilities and privacy for residents. High quality of livable urban landscape will be provided by reconnecting human with nature.



Tree branches through shadow and light



Rendering of the future Forest Zone



Rendering of the future Forest Zone

## CRCC • Huanhua Pedigree, Chengdu, China, 2017-2019

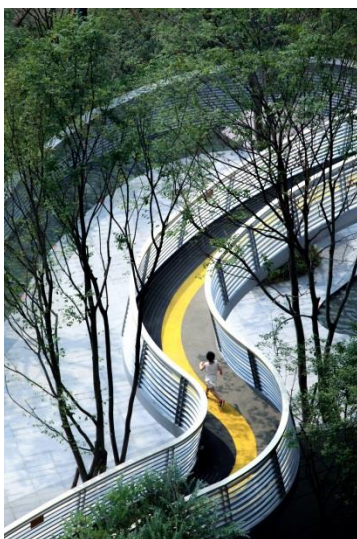
- Gold Prize, Yuan Ye Award 2019



CRCC • Huanhua Pedigree masterplan

Located on the verge of the 2nd ring road, CRCC • Huanhua Pedigree sits at the west of Chengdu city. In this project, the harmonious stroke of calligraphy is imprinted on the masterplan, and being transformed into functional landscapes. The smooth curvature has meanings beyond the text itself— it is a prospect of Chinese landscape that integrates the rivers, mountains and forests in nature.

The landscape is divided into three major courtyards, namely Poem Court, Tea Room Court and Moon Gate Court—representing the significant composition of Chinese cultures, including civilization, a slow pace of enjoying life, and the importance of family especially during family reunion at moon festival respectively. Each major courtyard encircles one condominium building, and a distinctive feature will be designed as a highlight of the courtyard. Surrounding the major courtyards will be other smaller individual courtyards, providing different functions and highlights of landscape for the residents, such as shallow pond, skywalk, cascading feature, amphitheater, chess room and mask playground.



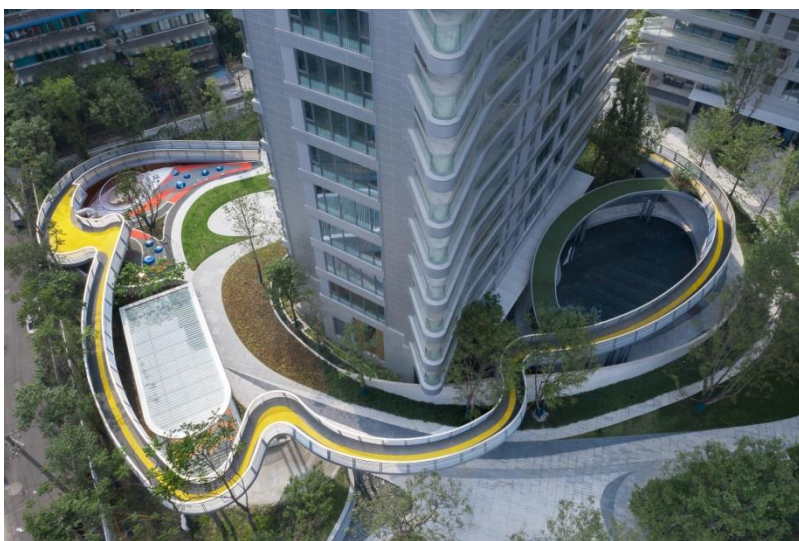
Skywalk



Moon Gate Court



Poem Court



Skywalk surrounding buildings

The project creates a prototype that successfully interweaves the traditional cultures with modern landscape. Thus, shaping CRCC • Huanhua Pedigree as a unique and unprecedented residential project in China for a high quality living experience, a good taste for relishing life, and a civilized environment that is soaked with cultures.



Water features and sunken pocket seats



Water cascading feature and water jets

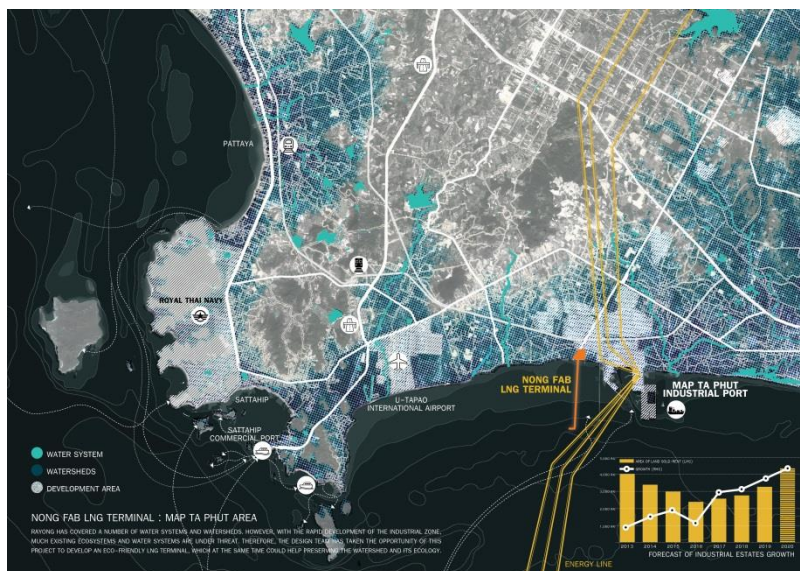
## NONG FAB LNG RECEIVING TERMINAL, Rayong, Thailand, 2017-Present

- Honor Award, TALA Professional Awards 2019 , Master Planning category
- Finalist, 2019 World Architecture Festival Award Future Projects - Masterplanning category
- Gold Prize, 2018 Yuan Ye Award International Competition, Municipal Landscape Category



Nong Fab LNG Receiving Terminal masterplan

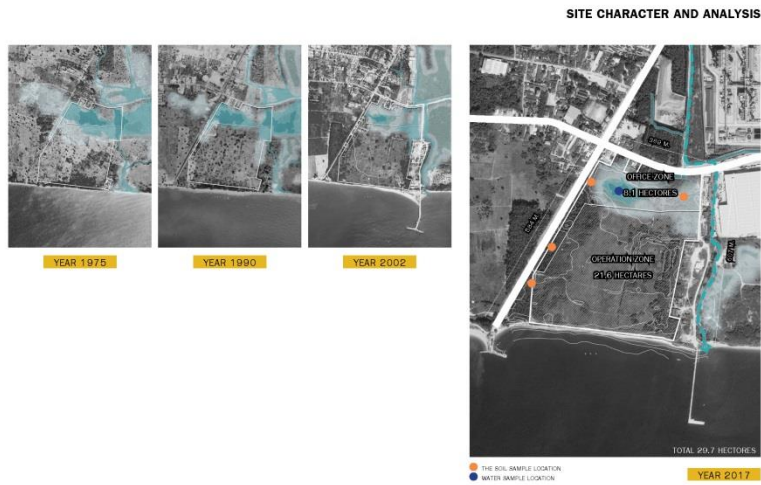
The new Nong Fab LNG Receiving Terminal is a 21.6 hectares of land to be used as a receiving terminal, for storage and for regasification processes, while an additional 8.1 hectares of land is designated as an office zone.



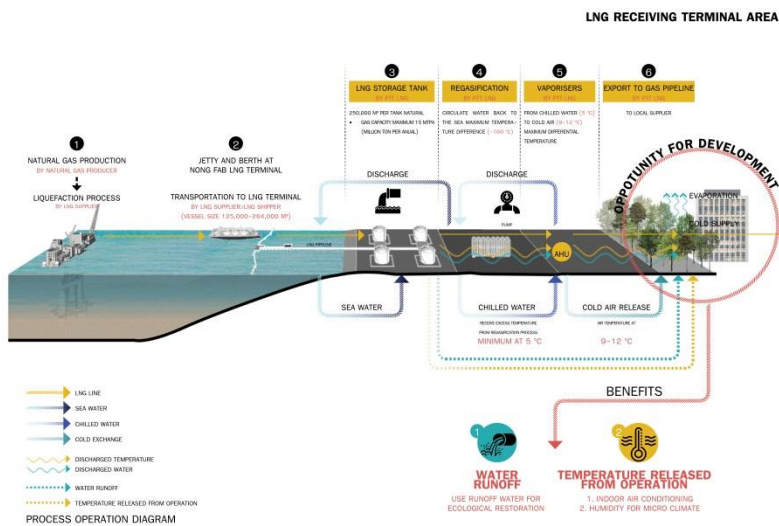
Site context and analysis

The term “Nong Fab” is a Thai expression referring to swampy terrain featuring an abundance of a hardwood shrub known as “Fab”. Responsible for designing the office zone, the team focused on studying historical remote sensing data to find ways to optimize existing natural drainage, restore the damaged swamp, reintroduce Fab and implement a full-blown reforestation program. As a result, the project will reintroduce endangered indigenous vegetation amongst 200 native plant species, while

nurturing forests and ecosystems optimally selected for their compatibility with the site's environmental conditions and intended uses.

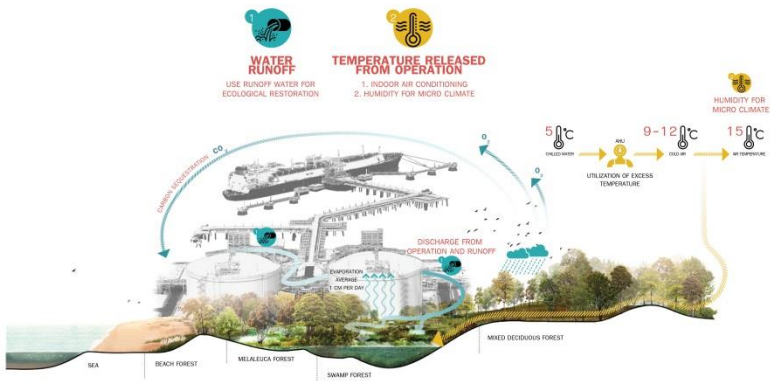


Site evolution



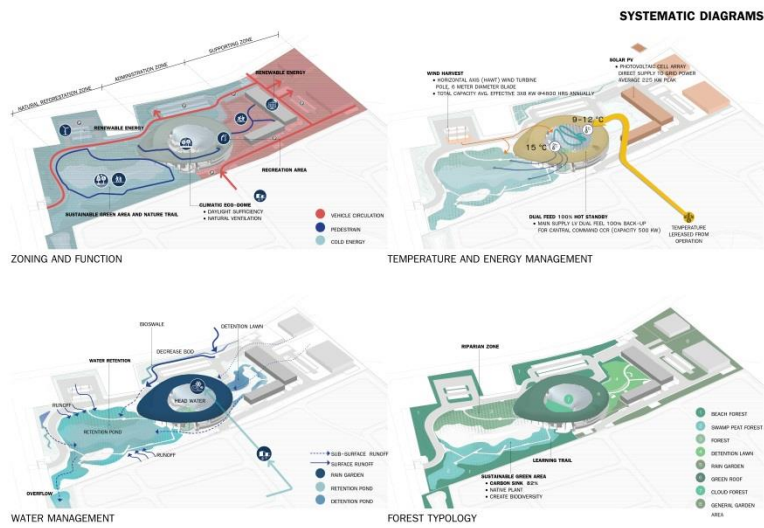
Process operation and regasification diagram





NONG FAB LNG TERMINAL AREA  
THE HARMONIZED JUXTAPOSITION BETWEEN INDUSTRY AND NATURE

Conceptual diagram



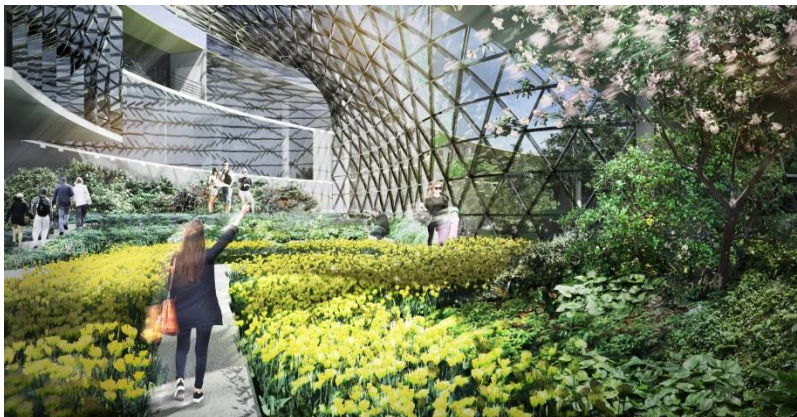
Systematic diagrams

FROM WASTE TO BIODIVERSITY GENERATION



Biodiversity section

Attainment of equilibrium between topography, hydrology, vegetation, ecology and project's end users resides at the core of TK Studio's landscape design philosophy, which induces our collaboration with experts of various fields. With intention to develop the site into a learning center for Rayong ecosystem and PTT LNG processes, the concept of the Harmonized Juxtaposition between Industry and Nature is proposed in this project. Industrial waste—the excess chilled water from regasification processes will also be repurposed to cool the building and support the growth of 23 species of temperate plant communities inside the Climatic Atrium. In order to achieve reforestation, a replicate of the natural ecotones of Swamp, Swamp Peat Forest, Melaleuca Forest and Beach Forest are implemented.



Climatic Atrium



Melaleuca Forest Zone



Swamp Peat Forest Zone



Detention Lawn – dry season



Detention Lawn – rainy season



Green Roof

This receiving terminal project provides opportunities for an environmental win-win situation between industry and nature, which also balances the social interaction with ecosystem diversification, while restoring neglected natural habitats. A zero waste scheme within the design concept will help reduce energy consumption and minimize waste production. On top of that, waste will be converted into environmental benefits in this project.

## THE METRO FOREST, Bangkok, Thailand, 2014-2015

- Outstanding Award, 2018 IFLA AAPME Awards, Social and Community Health category
- Award of Excellence, 2017 IFLA Asia-Pac Landscape Architecture (LA) Awards
- Honor Award, 2016 ASLA Professional Awards
- Excellence Award, TALA Professional Awards 2016
- Finalist, 2016 Rosa Barba International Landscape Prize



The Metro Forest masterplan

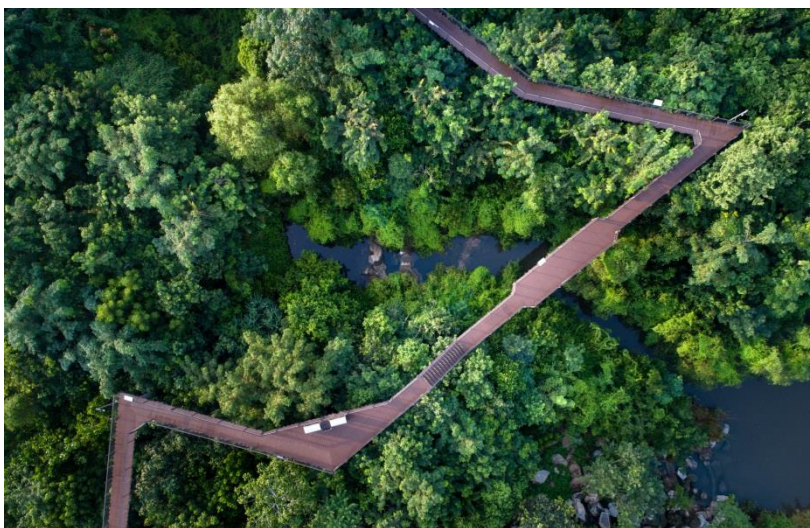
Located at the Eastern fringes of Bangkok, approximately 6 kilometers from the Suvarnabhumi International Airport, lies The Metro Forest Project. An ecological regeneration project designed as an outdoor exhibition space to cultivate environmental awareness and educate visitors about local forest ecology. The project reclaimed 2 hectares of abandoned land and reversed the trends of suburban sprawl, urban heat island, and flood-prone developments through the incorporation of historically local (native and introduced) lowland tropical tree species.



Over view of bird eye photo



Over view of bird eye photo



Skywalk among forest canopies

Approximately 60,000 trees of more than 279 unique species were planted on approximately 75% of the overall site. The reforestation technique of Dr. Akira Miyawaki was implemented to create diverse forest ecology and stimulate plant growth. This reforestation method discovered that the planted saplings on the fertile berm normally grow three times higher in the first year and continue to double its height in the second and third year. Moreover, this reforestation method uses 10 times lesser than ordinary reforestation—for 10 years of Miyawaki’s forest will result in 30 years old of general forest. This forest growth rate was used to calculate level of sky walk and observation tower.

The earthwork design of the berms serves as the backbone of the site’s new ecology and accommodates many design criteria including direct seepage flow from the built waterfall through the berms’ channels. Beside the irrigation purpose, the berms were carefully located to improve site’s ventilation, to prevent outside pollutions, to control ground level perspective, and to improve the aesthetic of the forest.



Forecast of eco forest growth



Evolution of the Metro Forest

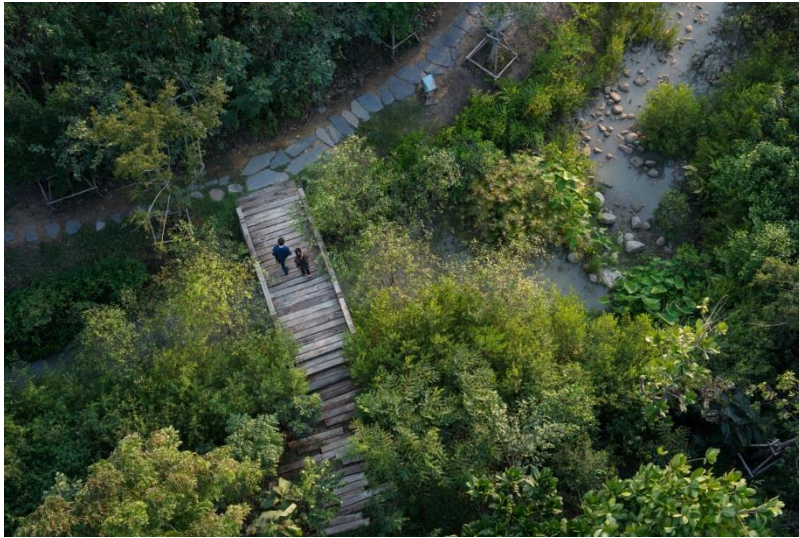
The Metro Forest induced many small animals, creating biodiversity, and establishing new ecosystem for the project.



Biodiversity established on site



The project and the rammed-earth exhibition center received LEED Platinum NC, and inspired public awareness of urban forestry and the importance of environmental stewardship in Thailand. The green roof on the building became the experimental field of planting low maintenance weed species for both aesthetic and functional purposes.



Bridge across stream



Rammed earth walls of exhibition building



Green roof at exhibition building