FY2023- 2024
Issue

the horti digest

Bring Nature to Life

From left to right: Ventus; E7; COM3 & LKCNHM

Awards for Excellence in Greenery

SDE 3 Courtyard

NUS National University of Singapore
Campus Asset Management
University Campus Infrastructure

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Awards & Certifications

Landscape Excellence Assessment Framework (LEAF) Certification, NParks


Ventus


NParks assesors site visit to Lee Kong Chian Natural History Museum


NParks assesors site visit to Ventus building


COM 3


LEAF Award ceremony – in the background from L-R: Ms Hwang Yu-Ning (NParks CEO), Mr Ang Chee Wee (NUS-UCI) & Mr Choo Jun Wei (Mao Sheng Quanji Construction Pte Ltd)

Our Environmental Enhancement unit started the journey for certification under Landscape Excellence Assessment Framework (LEAF) by National Parks Board back in March 2023. The LEAF is the first scheme in Singapore that is solely dedicated to recognizing the provision and management of greenery in developments.

We shortlisted our very own UCI office **Ventus, Lee Kong Chian Natural History Museum (LKCNHM), Engineering 7 (E7)** and also **School of Computing 3 (COM 3)** for certification. The team worked collectively with our PM colleagues and users on the required supporting documents and self assessment prior to the presentation and site assessment with the NParks assessors in July 2023 for the four buildings.

In end January 2024, NUS was awarded with **4** accolades, recognizing the University's efforts to integrate nature into our built environment. Among the awards, the **Lee Kong Chian Natural History Museum** and the **Ventus** building were **Gold**-certified for outstanding greenery while the COM3 and E7 buildings were certified under LEAF. To-date, NUS holds a total of **10** LEAF certifications, of which **4** are **Gold** and **1** is **Silver**.


SDE 3

Awards of Excellence, IFLA ASIA PACIFIC

NUS SDE 1,2 & 3: Campus in a forest project was awarded Excellence in the category of Cultural and Urban Landscape for the Landscape Architecture Awards 2023 by International Federation of Landscape Architects Asia-Pacific Region.

This landscape revamp project takes inspiration from the biodiversity and ecosystem dynamics of Singapore's native forests where the Environment Enhancement team build the plant palette based on native collection.

Greening and Giving:

The year of 2023 is the year of giving back to our environment, people and raising awareness of our goal to create a campus in a tropical rainforest. Our Environment Enhancement unit has supported and held **8** tree planting events involving **696 participants** from departments, faculty, alumni and donors in our goal to plant 100,000 trees on campus by 2030 to align with National Parks Board's OneMillionTrees movement.

A total of **530** trees were planted by our **NUS community** in 2023, which over 70% comprise of native species. Apart from greening and cooling the campus, our unit supports the **Plant It Forward Challenge** which is a fundraising initiative to support the NUS Enhanced Financial Aid Scheme (EFAS). Our collaborative efforts with **NUS Development Office, Office of Alumni Relations** and **NUS Society** have resulted in two official planting events for donors to plant over 100 trees and garnered **over $100, 000** in donation towards **EFAS** since **2022**.

Kent Ridge Road
Department of Biological Sciences

Staff and students from Dept of Biological Sciences (DBS) carrying out reforestation planting through the use of native trees and dense planting along 10 Kent Ridge Road .

NUS Field
Office of Finance and Central Procurement Office

Our OFN and CPO colleagues coming together for campus greening on a bright sunny morning.

^ *The community from AI Singapore office under ODPRT come together to green up the I4.0 vicinity.*

^ *Staff and trainees from AI Singapore enjoying the tree planting session on a fair Saturday morning.*

^ *Environmental stewards: Our RVRC students greening up their residential college with native species.*

^ *Our participants from the GreeNUSummit group Kent Ridge Road supporting us in our 100K Tree planting*

< ^ *NUS alumni get together for the symbolic tree planting ceremony at UTown to kickstart NUS Plant it Forward Challenge last November.*

^ *Staff and students get together to populate the ridge with native tree species .*

Preventive maintenance – Trees in NUS

Khaya senegalensis

Senegal Mahogany

Native range . – Western Tropical Africa to Northern Uganda in riverine forests and savannah woodlands.

Description – Very large tree with a max height of 30m. This tree is semi- deciduous, with a large dense crown and forms buttresses at its base. It is a very hardy, fast growing tree which takes well to moist soil and has a high transplanting survival rate hence was one of the most commonly planted tree when introduced back in 1970s as part of the 'garden city' vision.

Weaknesses: Fast growing, shallow root plate, prone to basal rot which is not easily detected and uprooting during increment weather.

Mitigation:

Crown reduction - studies have shown the co-relation of decreased wind loads with reduced limbs, keeping a smaller crown is a safer approach to a tree species with a shallow root plate.

Removal is the immediate option should there be presence of basal rot, lifting or if the tree is certified high risk by an arborist.

Where ?

Hon Sui Sen Memorial Library	**2**
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Engineering Block 5	3
Prince George's Park	1
Carpark 4	3
Raffles Hall	3

A look into the tree removal process

Engineering Block 5

SDE 4

Trichaptum biforme

Natural decomposition of logs at AS 8

Collaboration with NUS researchers

Our Environmental Enhancement Unit has been working closely with our researchers from College of Design Engineering (CDE) and Centre for Nature-based Climate Solutions (CNCS) to use NUS as a Living Lab to enhance comprehension of extant and prospective tree planting initiatives relative to microclimatic conditions, an exhaustive greenery inventory will be established.

As NUS aims to plant 100,000 trees by 2030, the greenery study at NUS involves a campus greenery inventory establishment integrating satellites images, GIS and 3D modeling. Microclimate data complements greenery data, contributing to a comprehensive analysis for a sustainable campus environment.

^ Steve, researcher from CNCS going through the GIS interface on portable tablet and *the data logging methodology* for data entries on site.

^ Featuring some of our team members at a hands-on session to measure parameters for some of our mature trees near Frontier.

In addition, the campus localization site study explores correlations between vegetative coverage and microclimatic conditions, employing strategically positioned sensors. This inventory will provide suitable greenery planting and maintenance guidelines for low-maintenance operations and better cooling effects across the campus. Thereby improving outdoor thermal comfort for individuals traversing the green spaces within the NUS campus.

Carbon sequestration, COOL NUS, Campus in a tropical rainforest

2023 Landscape Projects

Location: Utown
Landscape improvement work for landscape around the iconic Angsana trees with the use of ferns and shade loving plants such as aroids.

Location: Oei Tiong Ham Building
The landscape in front of the Lee Kuan Yew School of Public Policy was transform to allow for a more inclusive backdrop for visitors, staff and students to take commemorative photos on their stay on our Bukit Timah Campus.

Location: Pedestrian crossing at Kent Ridge Drive
Landscape rejuvenation for the pedestrian crossing area to enhance traffic clarity for both pedestrians and drivers and also add variety to the planting palette.

2023 Landscape Projects

Location: AS5

This open space next to AS 5 building was planted up with gingers, tree ferns and medium size trees to create a green vista for students and staff who are using the outdoor study areas at AS 5.

Location: Kent Ridge Crescent

Streetscape enhanced through adoption of Miyawaki planting technique which is an afforestation technique for mixed planting intended to simulate layers of a natural forest.

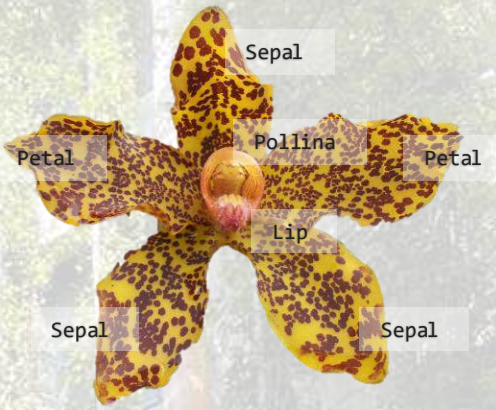
Location: Uhall Level 4

Creating an edible garden at Uhall in collation with Office of Human Resource and Central Procurement Office.

Seen in NUS

Grammatophyllum speciosum cv. Tiger Orchid

Largest orchid species in the world, commonly known as 'tiger orchid' for its striking brown and yellow flowers patterns resembling tiger stripes. The tiger orchid is native to Singapore, mature specimens can produce multiple flower stalks which are 2m long with at least 40 flowers on a single stalk. The flowers are lightly fragrant, long-lasting and pollinated by large bees.



^ Flower parts of the Tiger orchid

Delonix regia Flame of the Forest

Commonly known as Flame of the Forest, this ornamental legume originates from Madagascar with a deciduous nature in its original climate. In Singapore where there is no pronounced seasonality, the time of leaf shedding for this tree and other deciduous species varies. The next time you see this tree going 'botak' you would know that it is probably preparing for a grand blooming.

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Editorial Team:
UCI-CAM Asset Enhancement (Environment Enhancement unit)
Ang Chee Wee, Hansel Kuntadi, Mahadi Bin Sugiri, Mary Peh, Seh BeenTah, Tiong Jia Hui