

Thinking Green: The ITE College Central & Headquarters

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Images by Elmich Pte Ltd

Project Credits
Project Location ITE College Central, 2
Ang Mo Kio Dr, Singapore 567720
Developer Institute Of Technical
Education Completion Date February
2011 Green Wall Area 5324 m²
Manufacturer Elmich Pte Ltd
Architect RSP Architects Planners &
Engineers Pte Ltd Landscape Architect
Grant Associates Singapore Pte Ltd
Pte Ltd Landscape Contractor
Nature Landscapes Pte Ltd





“Think Green, Live Green, Love Green”, reads the eBook Green Footprint published by the Institute of Technical Education in 2012. The institution had introduced an Environmental Sustainability Framework in 2010 that put forth a systematic approach to help develop a culture and mindset that support sustainable green practices. Based on a three-part approach of culture, competency and industry collaboration, the five-year framework aimed to create more awareness about environmental sustainability issues, instil responsible environmental sustainability practices and develop competencies for a green economy.

In light of this green initiative, the ITE College Central & Headquarters, an impressive demonstration of the institution’s commitment to environmental sustainability, was completed in October 2012.

Green Features

The result of collaboration between one of the most established architectural practices in the region, RSP Architects Planners & Engineers Pte Ltd and the international landscape architecture company, Grant Associates Singapore Pte Ltd, the ITE College Central & Headquarters is the epitome of a world-class sustainable and innovative green design. Awarded the Skyrise Greenery

Award in 2013 and the President’s Award for the Environment in 2014, the complex made a bold statement in embracing Singapore’s transformation into a ‘City in a Garden’. As Mr Lim Cheng Siong, Senior Director, Campus Development & Estates, Institute of Technical Education, said, “From the Environmental Canopy to the Green Walls, the Inspiration Spine to the Multi-Layered Gardens, all are in line with the Government’s effort to create a sustainable and green environment.”

Resonating the institution’s dedication towards sustainability, the ITE’s third campus in Singapore incorporated an extensive integrated landscape as one of the key design considerations. The architectural orientation minimises solar heat gain on the East-West façade allowing for non-air-conditioned areas that substantially reduce energy consumption. The layout also complements the prevailing wind flow and helps in achieving adequate cross ventilation. Photovoltaic Cells that generate up to 200 MWhr of electrical energy have been integrated into the pixel roof design. Other key green initiatives include rainwater harvesting to minimise potable water use for irrigation, incorporation of roof gardens to lower the carbon footprint and the provision for daylight reflectors to maximise day lighting usage.

Among the numerous impressive sustainability features, the most striking is undoubtedly the 35 metres tall vertical greenery installation adorning the façades of the campus blocks of the ITE College Central & Headquarters.

1. The ITE College Central & Headquarters incorporates an extensive integrated landscape in order to uphold its commitment towards sustainability.

2. Green installation at the heart of the ITE College Central & Headquarters.

The Walls of Green

The “Vertical Greening” eco-initiative adopted by the institution in order to create an eco-friendly and conducive learning environment for the students lead to the incorporation of the Elmich VersiWall® GM (VGM) Green Wall System covering over 5,000 square metres of the eight-block building’s façade. Transforming the campus walls into façades of living green, the system protects the western part of the campus from the intense tropical sun, subsequently reducing energy consumption as well as the carbon footprint. It also offers the college community the tranquillity and rejuvenation of being in nature within the campus grounds.

Engineered and independently tested in Australia, the Elmich VGM architectural living wall system is comprised of planting modules made of UV-stabilised plastic and assembled as high strength lightweight structural panels. These modules contain geotextile liners (as planters) filled with EnviroMix GW, a primarily inorganic soil-less lightweight planting media. The modular VGMs are planted prior to site installation in a controlled nursery environment for selected plants to be firmly established and vertically oriented.

The living walls incorporated across the ITE College Central & Headquarters are made up of approximately 20,000 VGM modules allowing for a vast number of plant species to be integrated within the architecture. In fact, the 50,000 square feet vertical greenery installation is among the world’s largest green wall installations in a single development.



Not only is the system aesthetically sound and in line with the institution’s policy on environmental sustainability, it is also extremely durable and easy to maintain. Each of the modules is supported by stainless steel brackets enabling easy mounting and dismounting during installation and maintenance. Having been certified as a high-rise installation by professionals, the Elmich VGM Green Wall System is able to withstand wind uplift from various directions up to 110 kilometres per hour. An automated drip irrigation-cum-fertilisation (fertigation) system ensures regular delivery of water and fertilisers directly to the plant root zone.

Inspiring Sustainability

The ITE College Central & Headquarters with its physical design as well as community initiatives continues to inspire institutions across the globe to adopt a green policy that not only promotes an environmental sustainability culture but also encourages innovation and involvement in the greening of the planet at several different levels. The integration of the living walls within the architecture demonstrates a unified commitment to creating a sustainable environment for generations to come and paves way for the bright future of urban greenery. 

3. The vertical green walls are extremely durable and easy to maintain.

4. The green initiative adopted by the ITE College Central & Headquarters continues to inspire institutions across the globe to adopt an environmentally sustainable policy.

