

SUNMARKE SCHOOL

Jumeriah Village Triangle, Dubai



LEED-NCv3 School

Points Achieve	49	
Sustainable Site	24	12
Water Efficiency	11	6
Energy & Atmosphere	33	13
Material & Resources	13	3
Indoor Environmental	19	9
Innovation & Design	6	2
Regional Priority	4	4
Available Points	110	

FAST FACTS

EHS In-House Certifications: **Certified, LEEDv3 NC -School**
 BUA: **31,561.55m²**
 Location: **JVT05SCP001, Jumeirah Village Triangle, Dubai**
 Approx. Construction Cost: **155,000,000**
 Construction Completion: **15/08/2016**
 Date of Certification: **13/09/2017**

BENEFITS:

- **22.74%** Savings on Energy Use
- **46%** Savings on Potable Water Use by Water Fixtures
- **67.41%** Construction Waste diverted from landfill
- **15%** Materials Use with Recycle Content
- **20%** Regional Materials Use

THE GREEN BUILDING TEAM

Owner: **M/s Edutech Holdings Ltd.**
 Design Team: **GAJ Architectural & Civil Engineering Consultants**
 Main Contractor: **AL Basti & Muktha LLC**
 MEP Contractor: **United Masters Electromechanical LLC**
 GB Consultant: **Crown Home Engineering Consultants**
 LEED AP:
Faiz Mohammad
Aike Fatima Palagawad
Melanie Bacho
 Commissioning Authority: **Crown Home Engineering Consultants**

PROJECT BACKGROUND:

As per the resolution issued by H.H. Sheikh Mohammed bin Rashid Al Makhtoum, Vice-President and Prime Minister of UAE and ruler of Dubai on January 2008, that all owners of residential and commercial buildings and properties in the emirates of Dubai must comply with the recognized environment friendly specifications to turn Dubai into a healthy city that meets the demands of best practices and benchmarks of pollution-free sustainable development.

In response to the above resolutions and as mandated by EHS-Trakhees, to follow the EHS-Trakhees green building mandatory regulation and requirements, the project registered for the EHS In-House Certification which was based on LEEDv3 NC-School.

The School provides a vital function to our next generation hence it's essential to give them every ways and tools they need to acquire education through school which are environment friendly, comfortable and safe. And Fortes Education is committed to developing a sustainable, eco-friendly school facility. Other key factors included sensitivity to life-cycle costs, employee comfort and productivity.

GREEN BUILDING FACT SHEET



SUSTAINABLE SITE:

- During constructions, the Construction Team has formulated an appropriate plan and implemented erosion control measures relevant to the site. Such as stabilization of site entrance, dust control by watering, temporary fencing, protection of excavated soil, proper storing of construction materials and proper segregation of constructions waste, etc. for preventing the site erosion.
- The School has initiated comprehensive transportation management which are now being implemented in the school facilities which will quantifiably reduce the use of personal automobile and encourage both students, school staff and visitors to use sustainable transportation such as the following:
 - The school facility has provided 39 School busses for students and staff use.
 - Bicycle Racks has been provided
 - Assigned several Car Parking for low-emitting fuel efficient (LEFE) or hybrid car.
 - Assigned several car parking for car / van pool and drop-off area
- 61% of the car parking are provided with shaded with car parking materials having SRI of 29.
- 100% Roof final materials has been painted with coatings having SRI of 85.6
- External Lighting is design and installed such that it will focus in the school ground to reduce light pollution.

WATER EFFICIENCY:

The project installed efficient sanitary wares with low flush and flow rates which gives the project 46% water savings.

ENERGY & ATMOSPHERE:

- The project is having 22.74% energy savings through installation of the following:
 - Efficient building envelope. Wall, roof and glazing are having higher u-value.
 - Installation of efficient twin screw air cooled chiller with COP of 3.1
 - FAHU heat load is having 70% efficiency
 - Installation of LED lights
 - Installation of lighting control such as motion/occupancy sensors in the common areas and timer control for external lighting.
 - 100% of the building user hot water demand is meet through solar water heater.
- 100% Use of environment friendly refrigerant – R134A for chillers and R410A for the DX units.
- The project HVAC equipment's, lighting control and solar water heater has been commissioned and tested and balanced.
- All HVAC equipment and lighting controls, are connected to Building Management System (BMS).

MATERIAL & RESOURCES:

- The Construction Team had formulated and implemented proper Construction Waste Management Plans in which the project has successfully diverted **67.41%** waste construction from landfill.
- The Construction Team has successfully monitored the construction materials used in the project:
 - **15%** Construction Materials are having Recycled Content
 - **20%** Construction Materials has been harvested, manufactured and procured locally.



INDOOR ENVIRONMENTAL QUALITY:

- **100%** of the project indoor space has been provided with fresh-air meeting requirement of ASHRAE 62.1-2007.
- **100%** Non Smoking Building (inside and outside building)
- **100%** of the school classroom ceiling are with acoustic panel with noise reduction coefficient (NRC) of 0.75
- Densely occupied spaces has been provided with CO2 sensors and all FAHUs has been provided with air flow monitoring devices which are connected to BMS.
- **100%** Building flush-out has been done simultaneous with commissioning.
- **100%** of the Adhesives & Sealants and Paints & Coatings use in the project is complying with LEED requirements.
- FAHUs bag filter is MERV 14 rated and 10ft travel length rollmat has been installed in the main entrance of the building.