

Kuehne + Nagel DWC LLC Warehouse Extension



FAST FACTS

LEED Certification: **Gold, New Construction (NC) V3**
 Square Feet: **148,837 sq.ft / Warehouse, Showroom & Office Building**
 Neighborhood: **Jebel Ali Free Zone North, UAE**
 Construction Cost: **\$50.84 / square foot**
 Completed: **August 2012**
 Date of Certification: **June 29, 2013**

BENEFITS

26.50% Savings on Energy Use (by Energy Cost)
48.39% Savings on Potable Water Use by Water Fixtures
21.64% Materials Used with Recycled Content
64.95% Regional Materials Use
83.16% Diverted On-site Generated Construction Waste from Landfill

PROJECT BACKGROUND

A new resolution on the implementation of green building specifications and standards in the emirates of Dubai has been issued by H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of UAE and ruler of Dubai. As per the new resolution, effective on January 2008, all owners of residential and commercial buildings and properties in the emirates of Dubai must comply with the internationally 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 this resolution, we are proud to inform that “Kuehne Nagel DWC LLC Warehouse Extension” has been awarded with Prestigious LEED **Gold** Certification established by the U.S. Green Building Council and verified by the Green Building Certification Institute (GBCI). **This is the first LEED GOLD certified project in Dubai World Central (DWC).**

Kuehne+ Nagel DWC LLC – is a new construction Facility Complex project which comprises of **Warehouse Extension** with a total built-up area of **148,837 sq. f t.**

The project was submitted to USGBC LEED-NCv3 for certification and achieved Gold Rating.





PROJECT PROFILE

Kuehne + Nagel DWC LLC Warehouse Extension, Dubai, UAE

SUSTAINABLE SITES AND TRANSPORTATION & WATER EFFICIENCY

The project team sought to encourage sustainability. The following are strategies to support it:

- Provided preferred parking and low-emitting and fuel-efficient vehicles on-site
- Provided car/van pool parking
- Provided bicycle racks on-site
- Installed paving materials with low SRI value & or high albedo
- Installed water efficient landscaping
- Installed efficient water fixtures which consume less amount of potable water.

MECSD as the Sustainability Consultant of Kuehne Nagel, did energy modeling of the project during the design phase to evaluate the effectiveness of the building's energy conservation measures, in compliance with ASHRAE Std. 90.1-2004 Appendix G methodology.

ENERGY EFFICIENCY

The following are the Energy Efficiency Measures incorporated in the project:

- Highly insulated building envelope (better U-values for walls, slabs & roof)
- Optimized glazing and incorporation of skylights in the office and warehouse
- Efficient lighting and incorporating motion sensors in corridors and timer control for the internal and external lighting warehouse.
- Efficient HVAC systems (use of efficient FAHU, FCU)

MATERIAL AND RESOURCES

- Had diverted more than 83.16% (by weight) of the construction waste from landfill.
- Utilized construction materials with recycled content, wherein 21.64% of construction material used has recycled content.
- Used 64.95% regional materials – means those materials which are within 500miles radius from the Kuehne +Nagel Site.

INDOOR ENVIRONMENTAL QUALITY

- The IAQ performance complies with the minimum requirements of ASHRAE Std. 62.1-2004, Ventilation for Acceptable IAQ
- Installed air flow monitoring device for each mechanical ventilation to monitor the fresh air
- Improved indoor air quality through increase of ventilation for occupant comfort, well-being and productivity.
- Installed CO2 sensors to monitor the carbon dioxide concentration in the densely occupied spaces
- Developed and implemented Construction Indoor Air Quality (IAQ) Management Plan in reference to SMACNA guidelines
- Use of building material finishes with low emission of VOC for adhesives, sealants, paints and coatings and installation of CRI approved carpets.

OTHER GREEN FEATURES INCLUDES

- Earned an exemplary performance in with recycled content construction materials use, water efficiency and heat island effect.
- Provided appropriately sized dedicated areas for the collection and storage of recycling materials.
- Invested on green cleaning program to protect the health of the occupants and prevent harming of environment through using environment friendly cleaning chemicals.
- Provided Green Education Program for the visitors through providing LCD in the reception area and green tab in the K+N websites.

THE TEAM

Owner: **Kuehne Nagel DWC LLC**

Design Consultant: **Planquadrat Middle East**

Main Contractor: **Max Bogl Emirates Building Contracting LLC**

MEP Contractor: **Penguin Engineering Consultants**

Green Building Consultant: **Middle East Centre for Sustainable Development (MECSD), Dubai, UAE**

Chief Technical Officer: **Thom Bohlen, Architect, LEED AP**

LEED AP: **Nowfal Kunju Muhammed and Charity Peña**

Commissioning Authority: **Pacific Control Systems**

Photograph Courtesy of: **K+N DWC LLC**

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