

## SUSTAINABILITY CASE STUDY

### Garden Square, Grade A Office, Shanghai, China

March 2017



#### LOCATION

968 Beijing West Road, Jing'an District, Shanghai, PRC

#### SUMMARY

Garden Square is the oasis in the Jing'an district. Completed in 2013, with a 10,000 sqm garden full of greenery and paths that allows busy people to feel at ease, Garden Square aims to be one of the most environmental friendly and unique commercial buildings in Shanghai. In 2016, it has undergone further improvements and achieved LEED platinum certification. It has achieved the highest score within the LEED scale for office in China and thereby it has set the new standard for office buildings in China.

#### TYPE AND SCALE

Property type: Office  
Land Area: 28,081 sqm  
Gross Floor Area: 52,488 sqm  
Floor: 26 floors  
Parking: 250 spaces

#### TIMEFRAME

LEED certification application date: Dec 2015  
Project commencement: Feb 2016  
Improvements completion: May 2016  
LEED certification award date: Sep 2016

#### MAIN STAKEHOLDERS

Owner: Ting Ho Development Co.  
Asset Manager: City Square REI Limited  
Property Manager: Savills Property Management team  
LEED Consultant: CBRE Asset Services team

#### CONTEXT AND DRIVERS

The project was driven by the ambition to lower the environmental impact of the building and to create a healthier office environment. City Square and CBRE strived their best in every aspect such as ventilation, water supplies and waste handling to improve energy efficiency. Sustainability and energy saving were the key goals from the outset.



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## STRATEGY

## Goals and Targets

Since the application of the LEED certification has been made, City Square and the owner set their target goals to:

1. enhance the indoor environmental quality of the building
2. reduce the effects to the environment by the operation of the building
3. to reduce the energy consumption of the building

Through these attempts, their goal was to become the first office building to obtain a LEED EB (existing building) Platinum award in Shanghai, Puxi.

## Key Features

1. Upgrade ventilation system: increase filter efficiency by adding in LEED F7 grade air filter so as to achieve the U.S. ASHRAE standard; which can efficiently reduce PM2.5 & PM10. PM2.5 pollutants are reduced from 100µg/m<sup>3</sup> to 10µg/m<sup>3</sup>.
2. Green Cleaning Products: Garden Square uses cleansing agents and toilet papers that fulfil the Green Seal Certification which protects the water supplies and air quality. This protects tenants' health and reduces pollution to the environment.
3. Waste recycling: divert 100% of construction waste and 90% of consumable waste on site to minimize air, water and soil pollution.
4. Sustainable materials: More than 50% of the fitting-out materials are environmental friendly. 100% of adhesive and paint meets the requirement of SCAQMD (South Coast Air Quality Management District) and Green Seal.
5. Daily supplies are purchased nearby: The source of daily supplies are within 800km of the building so as to reduce the energy consumption in logistics.
6. Intelligent water supplies system: installed cooling tower water meter and replenishment system control, optimizing the building's water supplies system.

## IMPLEMENTATION

## Approach

By end 2015, City Square worked together with CBRE, who has successfully helped 3 out of 7 buildings in Shanghai to obtain the LEED certification, to redevelop Garden Square in order to fulfil the requirements of the LEED certification. All the existing elements were carefully inspected and a tailor-made proposal was made.

## Challenges

To ensure everything would be done properly, City Square worked with CBRE closely from the start and ensure all constraints were considered before implementing. All works were divided into different phases so as to make sure they would be completed on time and in the most efficient way. The improvements worked smoothly.

Citysquare ensured that their tenants' business operations will not be affected and improvements were implemented. Also, good cooperative network was established in order to achieve 90% recycling rate of consumable waste. Although it was a challenging task, both parties' common mindset to be environmental conscious made it happen.

## Progress and Outcomes

After the improvements, Garden Square has become the first LEED EB platinum certified office building in Shanghai, Puxi. It brings not only a better reputation, but also a nicer working environment to the occupants of the building. It has also led to a healthier office environment, which has a positive impact to the tenants and will make the building more attractive.

LEED rating:

Overall: 88/110  
Sustainable Sites: 19/26  
Water Efficiency: 13/14  
Energy & Atmosphere: 27/35  
Material & Resources: 8/10  
Indoor Environmental Quality: 11/15  
Innovation: 6/6  
Regional Priority: 4/4



## INFORMATION

## Information Sources

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