

Wal-Mart Case Study

Project: 42,000 sq m cross docking distribution centre

Location: Beichen Hi-Tech Industrial Park in the Binhai New Development Area, Tianjin, China

Investment Value: £11m +

Build period: 10 months (excluding full fit-out)

Handover date: September 2007

Site: Other plots available to let or buy



1. Project Overview

Gazeley, global provider of sustainable logistics space, delivered a pioneering new 42,000 sq m distribution centre in Tianjin for **Wal-Mart**. The site is located in the Beichen District of Tianjin City, and employs nearly 300 local residents. Featuring an array of sustainable measures, the development is not only environmentally friendly, but significantly reduces the operational costs for the global retailer.

2. The Brief

This project came as part of a strategic move in **Wal-Mart's** supply chain investment, which involved plans to replace the original north China distribution centre. The aim of this move was to help lower distribution and inventory costs for suppliers, reduce operation costs through improving work efficiency for **Wal-Mart** stores, and improve the working environment for employees.

The project was aimed at addressing **Wal-Mart's** corporate social responsibility requirements, of delivering goods to customers in an environmental friendly way.

3. The Challenges

Some of the biggest challenges involved in this project were the strict requirements presented by **Wal-Mart's** international standards, and the timeline in which they required delivery. The old warehouse failed to satisfy **Wal-Mart's** sustainable and long-term development goals, and therefore needed to be replaced as soon as possible with a facility that could meet these.

Specifically the new facility needed to be larger than 10,000m², unlike the old warehouse. Also, cells of 3000m² were at the time the norm in the Tianjin area which was not sufficient and too restrictive for **Wal-Mart** operations. In consequence, **Wal-Mart** requested the cells to be enlarged

(6000 m²). Creating a facility of this magnitude was unprecedented locally and therefore presented hurdles with acquiring the proper permissions to build the new distribution centre.

In addition, obtaining permission to build a cross docking facility of this magnitude was a key challenge facing the project.

4. Gazeley's Solution

Intensive Communication

Gazeley ensured the customer was kept abreast of details throughout the project, making sure their exact needs were always front of mind. Understanding of customer needs and expectations helped Gazeley to arrange their construction schedule precisely, and effectively eliminated the possibility of a prolonged delivery. To control the quality of this project, Gazeley also monitored and co-operated closely with their local partners throughout the whole process of construction.

Sustainable Approach

The new facility incorporates a wide range of eco-measures including roof water collection, new energy resources (solar hot thermal systems, wind turbine, photovoltaic panels, etc), and the use of recycled materials. Information regarding the energy savings, water savings, and CO₂ emission reduction is displayed on a monitor in the warehouse's reception and powered by the Wind-PV system. The whole distribution center is lit by using T5 energy saving lighting system, which runs on at least 20 percent less energy than normal light bulbs. The warehouse uses day lighting and an air-conditioning heat energy recycling system, to further lower energy consumption.



Local Research

To solve the problem of gaining permission for larger cells, Gazeley's team in China conducted a great deal of research on local regulations as well as international cases relating to similar projects in scale, and put together a series of authoritative studies of the facility's proposed design by local university professors and architects. This helped to ensure the project received permission and positive feedback.

Infrastructure Strength

To obtain permission to build a cross docking facility of this magnitude with more than 140 dock levellers, Gazeley had to use advanced automated fire control sprinkler systems and fire resistive materials. This project also created more employment opportunities for local people and furthered the economic development of the district, as well as the city.

5. The Result

The cutting-edge environmental technologies included in the design meant the facility was able to achieve Wal-Mart's international standards of sustainable development. The specific eco-savings include:

- 31 tons CO₂ emission reduction p.a.
- 33,000 kwh electricity usage saved p.a.
- 600,000m³ water usage saving p.a.

Jack Yang, Managing Director of Gazeley China, commented: "Gazeley is committed to reducing the environmental impact of its development activities by delivering sustainable distribution buildings. Gazeley's green aspirations are shared by **Wal-Mart**, and are the core of our partnership."

Not only did G Park Tianjin fulfill the strong sustainability goals set originally by Gazeley and **Wal-Mart**, but it also brought about large savings in operation costs for the retailer, leading to lower

product prices for **Wal-Mart's** customers.

Furthermore, Gazeley was able to deliver a 42,000-m² structure divisible into cells of 6000 m². This new layout allowed **Wal-Mart** to increase its storage capacities significantly which was paramount to meeting their long-term development goals. Indeed, the new facility has a daily capacity of 330,000 cases, four times the original one.

"The logistics system ensures Wal-Mart's steady and healthy growth in long term and guarantees higher work efficiency for both Wal-Mart and the suppliers. Wal-Mart strives for 'saving people money so they can live better', and the completion of the new Wal-Mart Tianjin Distribution Centre can help us better achieve the goal." comments Antonio Lee, Senior Director - Supply Chain of Wal-Mart China.

6. Long-term Partnerships

Gazeley's industry leading work and excellent customer service meant the company has been able to deliver built-to-suit warehouses to **Wal-Mart** enabling the retailer to strengthen their business.

This long-term partnership has already been experienced throughout other projects carried in the last few years in Germany at G.Park Bingen. Two units, of 22,000 m² and 15,000m² (the latter a chilled unit) have been developed for **Wal-Mart**.

In addition, Gazeley has also been employed to develop a second distribution centre for **Wal-Mart** in China. A 43,000m² project is currently underway at G. Park Jiaying, Eastern China, and due to be delivered by October 2008.