Queens Botanical Garden is thankful for Leadership Support from the Queens Borough President’s Office, New York City Office of the Mayor, New York City Council, and New York State’s Community Capital Assistance Program.

Core Project Team
Queens Botanical Garden
New York City Department of Cultural Affairs
New York City Department of Design and Construction
BKS Architects, LLP
Conservation Design Forum, Landscape Architects
Atelier Dreiseitl, Landscape/Water Design
Stonewal Contracting Corp., General Contractor

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Writer: Jennifer Ward Souder

For More Information
Please visit www.queensbotanical.org/sustainable or call 718.886.3800.

Illustration of QBG Master Plan, adopted in 2001
**Water is Conserved, Collected, Cleansed, and Recycled**

Low maintenance, drought-resistant plants are used in Garden landscapes to reduce the need for irrigation. Throughout the project, rainwater runs off hard surfaces into planted depressions, called bioswales, where it is filtered and absorbed into the soil. Rainwater that falls on the Auditorium is absorbed by a planted Green Roof. At the Horticulture/Maintenance Building, rainwater is collected for washing vehicles and tools.

Graywater from the Visitor & Administration Building’s sinks and shower is piped to a Constructed Wetland, while rainwater cascades off the Terrace roof into a Cleansing Biotope. In both places, water is filtered and treated naturally through bacterial activity on the roots of carefully selected plants. The treated graywater is returned to the building for use in toilet flushing, while the cleansed rainwater supplies a meandering water channel and fountain.

Conserving fresh water reduces the burden on the city’s water supply system and vulnerability to drought. The building reduced its use of fresh water by more than 80% compared to a traditional building of the same size.

Collecting, storing, and recycling graywater and rainwater onsite diverts it from the city’s costly, energy-intensive wastewater treatment process. These strategies also prevent the release of polluted water into local rivers and bays during large storms, when the city’s wastewater treatment system is overwhelmed.

**Innovative Design and Technology Reduce Energy Use**

The Visitor & Administration Building’s siting and long, narrow architecture allow 90% of the interior space to receive daylight and maximize natural ventilation. A geothermal system uses the earth’s constant temperature to provide seasonal heating and cooling. Rooftop photovoltaic cells transform sunlight into electricity to operate high efficiency ventilation and lighting systems.

By using no oil or natural gas, the Visitor & Administration Building consumes approximately 40% less energy and 80% less water than a comparably-sized conventional building.

**Materials Demonstrate Responsibility for the Environment and Human Health**

In the Garden’s new structures, building materials and furnishings incorporate a high percentage of locally manufactured and recycled content. Over 75% of the waste produced during the construction of the Visitor & Administration Building has been recycled and reused.

Interior products, such as fabrics, sealants, caulks, and paints, contain no or very low levels of volatile organic compounds (VOCs), chemicals found in many common products and building materials that can escape into the air and cause illness and allergic reactions.

Almost all wood-based materials are Forest Stewardship Council certified. Forest Stewardship Council (FSC) certification ensures responsible forestry methods were used in the harvesting of timber products.

**Native Plant Communities Welcome Insects, Birds, and People**

Almost all the plant species installed in the project are native to the New York area, including those in the Visitor & Administration Building’s Cleansing Biotope, Constructed Wetland, bioswales, and Green Roof. The structure itself is built on the former site of a parking lot, protecting open space.

Queens Botanical Garden’s master plan calls for maintaining distinct areas for culturally significant plant displays, as well as rebuilding native plant communities throughout the Garden. These include woodland, savannah, wetland, ridge and swale, and prairie ecosystems. The Garden will encourage the establishment and growth of these communities by taking steps such as revitalizing soils, reintroducing native plants, and implementing controlled burns.

Many of the native ecosystems that once occupied New York have been destroyed or seriously degraded by development, pollution and the introduction of invasive species of plants and animals. Over many years and with proper stewardship practices, Queens Botanical Garden’s plant communities will provide seed sources for future rebuilt and restored landscapes in and around New York.
Sustainable Landscapes and Buildings

In August 2004, Queens Botanical Garden began construction of the first phase of our Master Plan: new gardens showcasing native plant communities and water management, a new facility for our horticulture and maintenance departments, a Parking Garden, and a new home for our visitor services and administrative offices that achieved LEED® Platinum rating (Leadership in Energy and Environmental Design) from the U.S. Green Building Council.

Every aspect of the project exemplifies the Garden’s mission of environmental stewardship and fostering cultural connections. Visitors enjoy comfortable and inspiring spaces created by considering sun, wind, water, and plants, with new places for community gatherings and individual contemplation. Sustainable practices in design, construction, and operations protect the health of the environment, community, and future generations.

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