## MORI BUILDING and THE ENVIRONMENT

# "Vertical Garden City" - the Concept Behind Our Development

Based on the concept of the "Vertical Garden City", Mori Building Co., Ltd. has positioned "Environment and Greenery" as one of our primary missions in urban redevelopment, and has endeavored to shape a greener urban environment that contributes to the solution of urban environment issues such as the "heat island" phenomenon and beautification of the urban landscape. In densely developed areas, we have taken proactive steps to green areas by building high-rises with roof gardens that free up surface land for further greenery with the aim of realizing urban development where the city and nature can coexist in harmony.



Realization of the "Vertical Garden City" in the ARK Hills redevelopment



Roppongi Hills Mohri Garden



Atago Green Hills



ARK Hills roof gardens



Roppongi Hills rooftop garden

## "Greenery" Through redevelopment

Since the early seventies more than three decades ago, Mori Building has been strongly advocating the greening of our urban environment as evidenced by our slogan "Building Cities Rich in Greenery and Light." Among our many achievements, ARK Hills with its garden on the rooftop of Suntory Hall was a pioneering step in the greening of urban rooftops, and provided a model for our efforts to create of greenery through redevelopment in subsequent projects. For example in the case of Roppongi Hills, a comparison of the site before and after redevelopment reveals that our approach created approximately 1 hectare of new green land. Through the redevelopment of this and other major projects, we have created a total green area of about 5.3 hectares (please refer to the table below.)

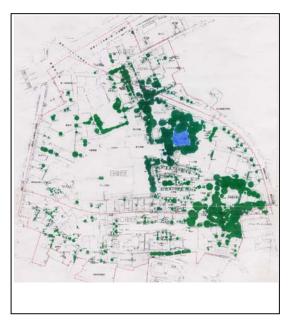
Table: Total "Greening" Area of Major Development Projects

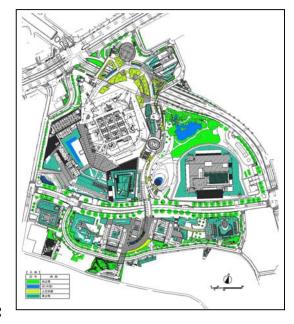
Project	Completion	Projec	t Area	"Green"	"Green"	Remarks
Name	Date	Site Area (m2)	Building Area (m2	Area (m2)	Ratio	
						Realization of rich green environment in the heart of Tokyo comprising
						the 7 ARK GARDENS (includes Suntory Hall rooftop garden) and a
						700m row of cherry trees. A return of wildlife to the city such as wild
ARK HILLS	1,986	41,186	22,853	8,780	21.32%	birds has been observed.
						while preserving the existing greenery on Mt. Atago, park
						improvements and a greenery plan that maximized Edo era flora was
Atago Green						executed. The result was a green chain linking Mt. Atago, Seishoji
Hills	2,001	38,452	10,677	11,882	30.90%	temple, and the twin towers of residences and offices.
						Located 100m above ground level, the relaxing atmosphere of the roof
Akasaka						garden is enjoyed by both office tenants and residents. With a "kitchen
Tameike		= =00		. =		garden" theme, the garden is arranged with olives, grapevines and
Tower	2,000	5,733	1,922	1,732	30.21%	other fruit-bearing plants.
						"The City Itself Should Become a Forest". This is the concept that
						resulted in the greening of approximately half of the site. In addition to
Moto-Azabu		40.000	0.070	= 000	40 400/	greening at ground level, "Moss in Net" was used to further "green" the
Hills	2,002	12,308	3,676	5,960	48.42%	rooftops and balconies.
						The development created approx. 1 hectare of new greenery and
D:						involved the planting of 68,000 trees and plants. A rich diversity of
Roppongi	0.000	0.4.770	57.000	04.000	05.000/	green space from the rice paddy on the rooftop of the complex to the
Hills	2,003	84,779	57,000	21,920	25.86%	restored beauty of the Japanese garden has been incorporated The garden is inspired by the theme of "fragrance" and is arranged
						with fragrant flowers and plants such as lavender and clematis. Plans
						call for the creation of a green network that seamlessly links with the
Holland Hills	2.005	3.545	2.347	897	05 000/	
Holland Hills	2,005	3,545	2,347	897	25.30%	greenery of the neighboring Holland embassy grounds.
						With "Historic Continuity" as the development theme, the height of the
Omotesando						buildings was kept at the level of the rows of zelvova trees that line the
Hills	2,006	6.051	5.030	1.845	20.400/	Omotesando Blvd. to harmonize with the existing greenery. "Greening"
пшѕ	2,006	0,051	-,	,	30.49%	of rooftops, as well as wall surfaces was also actively pursued.

Pre- and Post-Development Views of the "Greening" of Roppongi Hills

Total green area prior to redevelopment:
1.65ha

Total green area after redevelopment: 2.56ha (including pond area for public enjoyment)





### Rich Natural Environment in the Heart of the City

The creation of a mature and healthy green environment at ARK Hills is the result of a continuous program of maintenance and support. The 700m row of 150 Yoshino-variety cherry trees that were planted on perimeter of the site has become one of the famous cherry-blossom viewing sites in the city, attracting about 100,000 visitors every year.





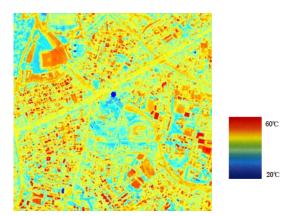
Boasting 20 years of healthy growth, the rows of "Sakura" cherry trees grace the periphery of ARK  $\tt HILLS$ 

Also in research on the presence of bird species conducted by the Ministry of Land, Infrastructure and Transportation (FY2003), the ARK Garden of ARK Hills was selected for inclusion in this comparative study. Through the planting of various fruit-bearing trees and plants in the gardens, provision of nesting boxes and other measures, ARK Garden has created a welcoming environment for wild birds. In the research, 13 species of wild birds were observed in the site including turtle doves, Japanese pygmy woodpeckers, and brown-eared bulbuls, and the results recognized how improvement of the environment has contributed to the return of wildlife to the city. In the sight of the cicadas that are born in ARK HILLS, the hibernating frogs, and trees and plants that have grown from seeds carried by the wild birds, you can feel the maturing diversity of the nature in the heart of Tokyo.

## Contributing to the Alleviation of the "Heat Island" Phenomenon

Securing greenery on a large scale can contribute to the mitigation of the "heat island" phenomenon in cities. In the urban heat environment metering survey of Roppongi Hills conducted by the Ministry of Land, Infrastructure and Transportation in 2004, the "greened" space was found to be 5° to 15°C lower than the surface temperature of asphalt pavement in the periphery. The lower temperatures in Roppongi Hills are clearly evident in aerial thermograph photos, providing observable evidence of the positive impact of greening.

Aerial thermographic imaging and photo of a 1Km² area including Roppongi Hills (surveyed on July 22, 2004 at 12:00 (noon))





Courtesy of J-POWER (Electric Power Development Co., Ltd.)

#### Green's Contribution to the Formation of Communities

Through efforts to promote greening of the urban environment, Mori Building is also contributing to the formation of communities. In 1997, the ARK Gardening Club, a community group driven by private citizen participation, was established at ARK Hills. The approximately 100-strong membership meets 2 to 3 Saturdays every month and not only participates in gardening activities under the guidance of a professional gardener and horticulturalist, but also engages in the volunteer care and maintenance of the gardens. In April 2005, the Roppongi Hills Gardening Club was launched, and the two clubs were merged in April of this year to form the Hills Gardening Club which has plans to tackle the further greening of the urban environment. In addition, the "greened" areas also energize the local community and provide a place for local residents to come in contact with nature through the holding of events such as the opening of the normally closed ARK Hills rooftop garden to the public, rose festivals, and rice planting and harvesting events at the rooftop paddy in Roppongi Hills.



ARK Gardening Club provides routine care for the gardens.



Rice planting at the rooftop paddy in Roppongi Hills.

Reference: Past Environment-related Awards Received by Mori Building

Reference. Pa	st Environment-related Awards R	eceived by Mori Bullaing	
Year	Award Name	Presenting Organization	
2002	Urban Green Space Award "Minister of Land, Infrastructure and Transportation Award"		
2005/2006	SEGES (Social and Environmental Green Evaluation System) Urban Green Space Award STAGE3	Urban Green Space Development Foundation	
2006	Road Day "Distinguished Service for Roads - Director of the Construction Bureau Award"	Ministry of Land, Infrastructure and Transportation	
2006	Energy Globe Award	Energy Globe (Austria Citizen Group)	
2007	SEGES (Social and Environmental Green Evaluation System) Urban Green Space Award Excellent Stage 3	Urban Green Space Development Foundation	
2007	Road Day "Distinguished Service for Roads - Minister of Land, Infrastructure and Transportation Award"	Ministry of Land, Infrastructure and Transportation	