

# PARKROYAL ON PICKERING

HOTEL & SPA



“The project at Upper Pickering Street is a study of how we can increase the green replacement in a highrise development in the city center and multiply it in a manner that is architecturally striking, integrated and sustainable.”

WOHA

## PROJECT SUMMARY

WOHA's design team takes architecture and landscape integration to a whole new level with their design of the Parkroyal on Pickering. The team drew inspiration from the landscape of the adjacent Hong Lim Park. By incorporating the same greenery within and around the Parkroyal Hotel, they created an elevated area of green space approximately twice the size of the park. A large platform bridges the towers and provides a private park space, featuring tall palm trees, shrubs, a flowering understory, a waterfall, and hanging vines. The Parkroyal on Pickering exemplifies Singapore's stated goal of becoming a "City in a Garden" through its unique integration of the local tropical ecosystem and the city fabric.

In contrast to the surrounding cityscape, the Parkroyal is a celebration of Singapore's tropical ecosystem. WOHA's design blends outside and inside using biodiverse equatorial plantings on the sky-gardens, which are visible through the large windows of the guest rooms, and indoor greenwalls and potted plants.

Beneath the 12 story E-plan that houses the guest rooms, a 5 story podium supports garden terraces, water features, and infinity pools. The podium, composed of slabs of concrete layered to resemble an organic terrain, forms the roof of the oversized porte-

cochere. Positioned at the nexus of two distinct areas of the city, WOHA describes this elaborate structure as a "ceremonial gateway," bridging Chinatown to Hong Lim Park and the commercial district.

Despite its grand size, the Parkroyal retains a human scale. The eye-level view of gardens reduces the perceived height of the guestrooms, lending the space a residential feel. The human scale upholds WOHA's intention to restore a sense of place to the city center by creating a "communal building-as-garden for an idealized green city."

## Location

Singapore City, Singapore: tropical rainforest climate

## Project Address

3 Upper Pickering Street, Singapore City 058289, Singapore

## Project Type

Hotel, owned

## Area

12,121 ft<sup>2</sup> (1,126 m<sup>2</sup>)

## Year of Completion

2013

## Occupant

Parkroyal Hotels and Resorts

## Design Team

WOHA

## Keywords

Elevated landscapes, green hotel

## Awards

8 ARCHITECTURE AWARDS INCLUDING 2014 Iconic Awards, Winner, German Design Council

2 INTERIOR DESIGN AWARDS INCLUDING 2013 Best of Year Awards, Winner, *Interior Design Magazine*

2 URBAN DESIGN AWARDS

2 HOSPITALITY DESIGN AWARDS

## Biophilic Patterns

Visual Connection with Nature  
Biomorphic Forms & Patterns  
Risk/Peril  
Complexity & Order

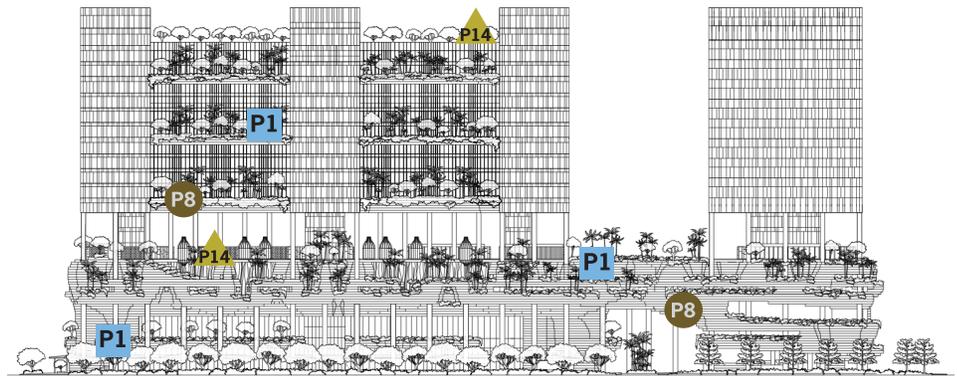
*Prepared by Lilli Fisher for Terrapin Bright Green.*

*All photos courtesy of Patrick Bingham-Hall unless otherwise noted.*

Above: Sky-gardens provide intimate views of nature and distant Hong Lim Park. [P1](#) [P7](#) [P8](#) [P11](#)

## NATURE IN THE SPACE

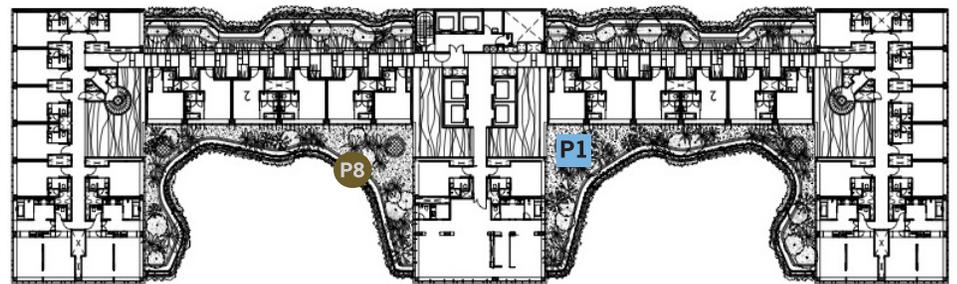
- [P1] Visual Connection with Nature.**  
Views of Hong Lim Park or the sky-gardens are accessible from nearly every guest room; abundant indoor plantings and water features.
- [P2] Non-Visual Connection with Nature.**  
Odors from indoor plants; sounds of birds and insects attracted by native plants.
- [P3] Non-Rhythmic Sensory Stimuli.**  
The wind rustling through trees on planted sky-gardens; birdsongs.
- [P4] Access to Thermal & Airflow Variability.** Cool air flow from the water features both inside and outside; operable windows in guestrooms.
- [P5] Presence of Water.** Abundant water features incorporated into sky-gardens, lobby, passageways, infinity pool.
- [P6] Dynamic & Diffuse Light.** Dappled light through the tree canopy; light reflected off the water; natural light indoors; translucent curtains in guestrooms, and bird cages.
- [P7] Connection with Natural Systems.** Opportunities to observe interactions between birds, insects, and plants.



ELEVATION

## NATURAL ANALOGUES

- [P8] Biomorphic Forms & Patterns.**  
The topographic layers of podium and sky-gardens; woodwork on the lobby ceiling and front desk; furniture and light fixtures.
- [P9] Material Connection with Nature.**  
Unfinished stone walls, polished granite walls, unpainted wood surfaces, carpet with natural color palette and varied textures.
- [P10] Complexity & Order.** Lattice pattern in the spiral staircase, function rooms, and other interior design elements; spatial configuration.



FLOOR PLAN

## NATURE OF THE SPACE

- [P11] Prospect.** Views from the sky-gardens and from guest rooms; open space of the lobby.
- [P12] Refuge.** Cabanas with optional privacy curtains; secluded wooded spaces with small water features.
- [P13] Mystery.** Glimpses of greenery through small open spaces cut in walls.
- [P14] Risk/Peril.** Cantilevered 'birdcages' and open air platforms which overlook the city from great heights.

*Elevation: The elevation is stacked at two different rates. Interior spaces rise floor by floor, while the sky-gardens occur every four levels. This separation provides visual access to nature from all guest rooms while considering the scale of the growing landscape. The elevation is also clearly broken into zones, ground floor, park level, and guest rooms.*

*Floor Plan: The above plan highlights the integration of two distinct languages. The rectilinear E-plan interlocks with the highly dynamic and responsive biomorphic sky-gardens. It also provides visual access to nature for a larger percent of the floor plan than a linear design.*

## [P1] VISUAL CONNECTION WITH NATURE

WOHA's vision for the Parkroyal was of a "hotel-as-garden." Every four-stories, curvilinear "sky-gardens" wrap the front of the hotel in local tropical plants. This design creates over 49,000 ft<sup>2</sup> of green space, doubling the growing potential of the site. The E-shaped plan of the building facilitates the site's visual connection with nature, maximizing the number of guest rooms looking out on Hong Lim Park, the hotel's sky-gardens, or both.

The visual connection with nature is reinforced through the extensive use of indoor living plants. In the lobby, vines are interlaced with wood panel walls and beds of flowering plants bloom. In select guest rooms, outdoor plantings extend along the length of the

windows, further blurring the line between indoors and outdoors. Exterior walkways that transverse the spaces between private guest rooms and communal areas are bordered by equatorial plants and water features.

In addition to providing views of nature to its guests, the Parkroyal serves as a rare green space within the dense urban environment of Singapore. The southwest side of the building, which houses the hotel's service areas, faces away from Hong Lim Park and toward a public housing facility. Hanging gardens adorn this back facade, providing the public at large with a **view to elements of nature, living systems, and natural processes.**



**[P8]**  
**BIOMORPHIC FORMS & PATTERNS**

Topographically layered slabs of precast concrete stretch between the glass towers of the Parkroyal on Pickering creating a vertical landscape that resembles the terraced rice paddies of Asian countrysides. These organic forms are unique among the densely packed hard-edged structures that make-up central Singapore. **Symbolic references to contoured, patterned, textured or numerical arrangements that persist in nature** are expressed not only in the exterior form of the building, but throughout the interior spaces, in wall and floor detailing, furniture, and minutia.

Layers of wood in curvilinear forms create both the main lobby desk and the hotel bar. These structures seem to emerge organically from the bands of wood that cover the walls and ceiling immediately surrounding them. In addition, both the bar and the main lobby desk stand on amorphous islands of textured carpeting, which allow them to blend into the floor. These features defy sharp angles, to create forms that suggest the slow weathering of land by wind or water.

Left: The Parkroyal's lobby features strong biomorphic patterns in the curvilinear forms of the main desk, ceiling and carpeting. The sweeping topographic forms of the port cochere are also visible through the glass front wall. **P8 P10 P11**



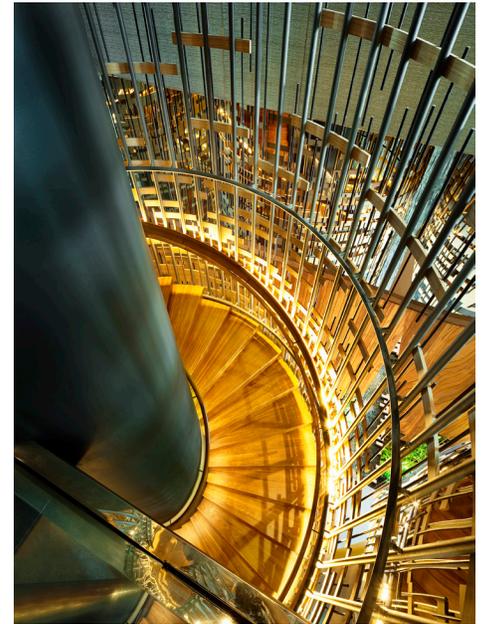
**[P14]**  
**RISK/PERIL**

One of the Parkroyal's most distinctive features is its colorful human-sized bird cages. Perched on the edge of cantilevered platforms overlooking the city, these spaces offer a strong sense of risk and peril. From inside the birdcages, there is only one means of egress, along a narrow platform protected only by glass and wooden handrails. The guest is fully enclosed and protected by the steel bars of the bird cages, and yet fully aware of the great distance between their body and the ground. These whimsical forms present an **identifiable threat coupled with a reliable safeguard** providing a moment of playfulness and excitement.

Exterior walkways that lead from the guest rooms to the elevator lobby provide a similar experience. There are no horizontal railings, instead, the guest is protected by tall vertical bars spaced a few inches apart. Walking across these platforms, the guest can peer over the bars to look down upon the city street from as much as 16 stories up.

The design also provides dramatic views from the infinity pools on the 5th floor. The infinity pools extend to the edge of the pool deck. Guests who swim to the edge of the pool look out on a view of the city and Hong Lim Park, unimpeded by railings.

Center: Brightly colored bird cages, accessible by narrow cantilevered platforms, offer distant prospect views of the city within an area of refuge and contain a strong element of risk. **P1 P5 P8 P11 P12 P14**



**[P10]**  
**COMPLEXITY & ORDER**

Intricate geometric and fractal patterns are a motif of the Parkroyal's interior detailing. A spiral staircase, itself reminiscent of the pervasive Fibonacci series, is enclosed in a complex lattice of wood and metal. On the lobby entryway facade, thin slats of timber are layered to create a matrix resembling local vernacular woodwork. This technique is also used on the ceiling and upper third of the walls in the function rooms, as well as at a smaller scale in the folding screens that divide seating areas from larger open spaces. Through its use of **rich sensory information that adheres to a spatial hierarchy similar to those encountered in nature**, the Parkroyal creates a visual environment that is stimulating, but not stressful.

Hierarchical patterns are also referenced in the building's spatial structure. The building is separated into three distinct zones, the ground floor, which contains the lobby and port-cochere, the park level, a richly landscaped terrace with infinity pools, and the guest rooms, which comprise the top 12 floors. From the 5th floor up, soft organic forms wrap the inside of the E-plan tower every four stories. Guests look down on layers of gardens above a dense urban landscape. The integration of geometric and biomorphic forms, the layering of landscapes and the creation of vertical zones, results in a multifaceted spatial structure that is intuitively logical.

Right: A complex lattice of steel and narrow wood slats encases the main spiral staircase providing a stimulating visual environment. **P6 P9 P10**

## HEALTH BENEFITS

WOHA's extensive use of biophilic patterns in the design of the Parkroyal on Pickering provides an environment which facilitates deeply restorative experiences, including the following potential health and wellbeing responses:

### [P1] Visual Connection with Nature

Lower blood pressure/heart rate; improved mental engagement/ attentiveness; positively impact attitude and overall happiness

### [P8] Biomorphic Forms & Patterns

Observed view preference

### [P10] Complexity & Order

Positively impacted perceptual and physiological stress responses, Observed view preference.

### [P14] Risk/Peril

Decreased diastolic blood pressure; improved creative performance; improved comfort

The significant amount of space dedicated to living nature and the preference for organic over hard-edged forms creates a visual oasis within Singapore's dense city center. Views of nature have been shown to lower blood pressure and heart rate, improve mental engagement and awareness and positively impact attitude and overall happiness. These implicit reactions may translate into a desire to spend more time in the hotel's public spaces, and to plan return visits to the hotel in the future. In addition, the high exterior visibility of the hotel's natural forms and gardens provide local residents with an opportunity to experience the same positive health effects.

## HOTEL-AS-GARDEN

The Parkroyal on Pickering's relationship with nature is not only symbolic; it is utilitarian. Sustainable systems integrated throughout the hotel reduce its use of valuable resources



and provide environmental co-benefits. The building's north-east orientation, high-performance glazing, self-shading design, and use of natural ventilation all work to reduce its cooling requirements. At the same time, its high perimeter-volume ratio reduces artificial lighting needs. A rainwater collection system on the upper level irrigates the sky-gardens below. This system is supplemented by NEWater, reclaimed water provided by Singapore's Public Utilities Board, which stocks the site's water features. In addition, an array of photovoltaic cells on the roof supplies electricity to the grow lights and soft-scape lighting, making these sky-gardens net-zero energy.

The 15,000 m<sup>2</sup> (161,458 ft<sup>2</sup>) of green space, also provide co-benefits to the hotel and surrounding area. The sky-gardens are planted with regional species, including *Frangipani* trees, *Euterpe* palms, flowering *Heliconias* and *Alpinias* as well as a variety of large-leaved shrubs, ferns and hanging creepers. This biodiverse planting mimics the tropical plant community to maximize habitat creation for local birds and insects. Furthermore, the

extensive green space provides shade and insulation to the building, reduces the urban heat island effect through evapotranspiration, and improves local air quality through filtration of particulate matter, absorption of carbon dioxide and emission of oxygen.

The Parkroyal on Pickering is a conspicuous fusion of nature and architecture and a subtle demonstration of environmentally sustainable urban design. Through careful evaluation of place, WOHA designed a visual amenity that is reflective of Singaporean culture and ecology. An affirmation of Singapore's ongoing goal to integrate nature throughout the urban landscape, this distinctive space creates restorative experiences for its guests and for local residents, for whom it provides views of nature and nature-inspired forms from the surrounding buildings and the streets.

*Above: The contemporary glass towers of the Parkroyal are wrapped in undulating terraces densely planted with tropical species. The building stands out from its urban surroundings an embodiment of Singapore's goal of becoming a "City in a Garden." P1 P5 P8 P11 P14*



**TERRAPIN**  
BRIGHT GREEN

### Terrapin Bright Green

Terrapin is an environmental consulting and strategic planning firm committed to improving the human environment through high performance development, policy, and related research. We provide biophilic design strategies with measurable outcomes that place our clients' properties at the forefront of innovative design. Visit us at [www.terrabinbrightgreen.com](http://www.terrabinbrightgreen.com), or email us at [biophilia@terrabinbg.com](mailto:biophilia@terrabinbg.com).

### WOHA

A profound awareness of local context and tradition is intertwined with an ongoing exploration of contemporary architectural form-making and ideas. WOHA conceptualizes all aspects of the architectural process, and environmental principles have always been fundamental to the work of the practice, which is guided by a commitment to responsive place-making and to the creation of an invigorating and sustainable architecture. Visit us at [www.woha.net](http://www.woha.net).