



## City within a Garden

### GUSTAFSON PORTER with contributions from Larry Barth

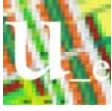
Singapore has established itself as one of the world's great cities. Economically and culturally it has become recognized as a global leader, and this success is registered in its skyline and in the vitality of the city's fabric. With the extension of its central business district to wrap around Marina Bay, it is embarking on a series of projects that will dramatically amplify this success and also make Singapore one of the world's most compelling waterfront cities. Gardens by the Bay stands at the heart of these projects and will demonstrate the role of landscape in integrating an expanded and diversified city centre for the 21st Century.

Of course, Singapore is not unique in the progressive transformation of its waterfront, for this has been one of the central themes of urban redevelopment projects around the world over recent decades. Many of the world's great cities are centres of maritime trade, and this has placed them at the forefront of global networks of development, innovation, and cultural exchange. They are marked by their economic strength and multi-cultural feel, and today are capitalizing on their waterfronts to sharpen their identities and respond to urban and economic trends. Singapore is in a position to set a new standard among waterfront cities over the next two decades. Sydney, Vancouver, Boston, San Francisco, and Shanghai all are well-regarded waterfront cities, but none of them can match Singapore's potential for integrating recreation, intimacy, civic purpose, and the economic power of their central business districts into a coherent and unified urban design solution. Gardens by the Bay and the Marina Reservoir will establish the landscape, waterfront, and infrastructure platform for pursuing this ambition to reality.

### Marina Bay and the Key Urban Trends

There are three general trends which are particularly important for understanding the challenges and potentials underlying the ambitions of Gardens by the Bay. First, recreation has become a key component of urban living and a major driver of urban development. Whether as spectators or participants we are increasingly drawn to sporting events and outdoor activities, and our cities are expected to accommodate them. Secondly, the learning experience is taking on a more central role in everyday culture and leisure activities. This has become particularly true with the rise of knowledge-economy industries. An increasing diversity of museums and science centres has joined concert halls and theatres as central components of our urban cultural fabric. Together, these two trends are redefining our expectations of the world's great cities, both from the point of view of residents and of visitors. A successful urban fabric is one which can incorporate these new resources into the patterns of everyday life.

The third important trend is that city centres are becoming far more complex urban environments. Downtown Singapore stands at the heart of a pulsating city-region and must marshal an increasingly diverse set of urban functions and forces. Greater demands for mobility and connectivity mean new transport infrastructure must dovetail neatly with increasing expectations for residential resources and facilities. Quiet gardens and active pedestrian streets must be intricately woven with corporate towers and motorways. There have never been greater demands upon city centres to effectively manage



complexity and intensity. This is why landscape has become so important an ally of urbanism for the 21st-Century city. The tools of the landscape architect are oriented toward the management of complex environmental systems occupying and transforming the ground over time.

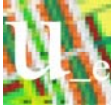
Singapore's ambition to become a great waterfront city has progressed noticeably in recent years. The many new amenities enlivening the banks of the Singapore River and extending upriver to Clarke Quay testify to the intention. It is an ambition which will reach fulfilment and critical mass only with the completion of Gardens by the Bay and its associated urban projects. The scale and nature of the city centre's transformation through these projects can hardly be exaggerated. Not only will they deliver a dramatic increase in built floor area and population, but these projects will bring a new balance between living and working to downtown Singapore, and this provides the necessary condition for a continuous day-and-night activation of waterfront amenities. It is precisely the ambition with which Singapore is responding to today's urban trends that makes Gardens by the Bay one of the world's most exciting urban projects, for the focus of the project is so clearly upon fulfilling the full measure of the promise these trends contain.

## The Key Challenges: Balance and Integration

For all their beauty and attraction, waterfronts present an inherent challenge to urbanism which is often underestimated. The water bodies themselves are uninhabited, and so can offer no critical mass of population in support of local resources and amenities. They interrupt patterns of everyday urban activity and present a natural challenge to seamless connectivity. To establish a set of active gardens on a waterfront platform means confronting these inherent challenges. First and foremost, it means setting our goals well beyond the usual role for an urban park. The challenge here is not simply to bring respite from the bustling activity of the city, but to pull the city's energy toward the waterfront and draw the allure of the water into the city's core.

Gardens by the Bay represents a project in pursuit of the necessary balance and integration that will weave together the city and its waterfront. The typical park contains too few propositions for this purpose. The gardens, instead, aim for a wealth of purposes and activities.





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They must offer a balance between legibility and diversity of experience to consistently serve both residents and visitors. They must encourage activity equally well at night as during the day, and reach as effectively toward the city pavements as toward passing watercraft. To achieve the critical mass implied in these ambitions requires a clear attention to multiple scales of integration. A couple dining at Clarke Quay, a father and son kayaking in Kallang Basin, and two teenage girls learning about tropical highland plants in the cool conservatory must each see themselves at interchangeable locations in a simple system. At the same time, future residents near Republic Avenue and in Marina South must each see the patterns of their everyday life as including a short walk to their local gardens at the waterside.



The beauty of Singapore as a garden city on a tropical island makes this easy to envision as a future result. The challenge of the planning effort is to understand the progressive elaboration of this vision in the emergence of a new and well-inhabited landscape. The cultivation of new ecosystems must be dovetailed with the phasing of urban growth and infrastructural development. One of the key strengths of Gustafson Porter is our solid understanding of landscape systems and their temporal and three-dimensional development. We understand how landscape can respond to the timing of urban development, accommodate new infrastructure, offer new settings for leisure activity, and establish comfortable outdoor environments. We aim to show how the detail of landscape design, from its planting schemes and groundforms to its waterfront structure and environmental engineering, can contribute to the progressive emergence of a vibrant new pattern of urban living in Singapore.





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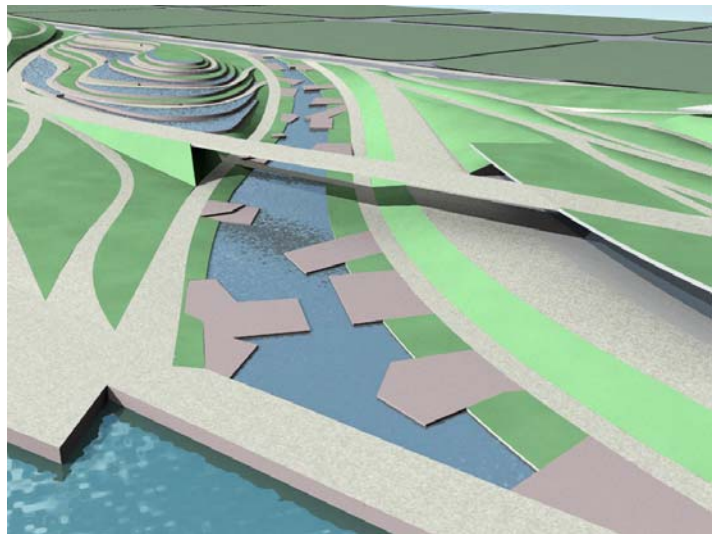
## From Design Understanding to Planning Principles

Urbanism often works from abstract functional plans toward more richly detailed design. At Gustafson Porter, we begin by clarifying our vision of a three-dimensional landscape form, ask how it can be achieved materially over time and with best effect, and then establish the planning principles that will allow relevant decision-makers and stakeholders to join in the implementation process. We understand the intricacy of landscapes and the ways they are moulded over time to shape the character of their inhabitation. Urban landscapes present us with a wonderful diversity which derives from the particular ways they mark their response to surrounding conditions, both environmental and cultural, and it is the role of planning and design to bring this variety into an effective and manageable coherence. Our design explorations have precipitated six principles which would govern our approach to the design process with Singapore's NParks, and which are embedded in the more specific design solutions which follow.



First, both by our own inclination and our reading of Singapore's urban fabric, we envision the Gardens by the Bay as a strongly textured, three-dimensional landscape. Movement above and below ground, along sheltered walkways, and through covered plazas presents a natural response to the tropical climate which offers still untapped potential for design. There is a common acceptance of textured landscapes and multiple grounds, and this offers a rich design vocabulary which can be employed to a variety of ends. The opening of the ground and juxtaposition of levels can improve legibility and orientation in intricately detailed environments. The texture and relief this impresses on the landscape can help deliver spatial clarity and well-defined symbolism when seen from surrounding towers. Most importantly, it allows us to interweave networks of paths and event spaces to intensify activity within the gardens.

Secondly, we believe that the design philosophy for urban parks has shifted toward the blurring of experiential boundaries with the surrounding city fabric. While N Parks must ensure clear lines of responsibility for the maintenance of public spaces, today the relation between park and city is more often conceived as interlaced layers of design elements and urban programmes. As much as possible, we would aim for continuity and coherence with surrounding urban blocks. The corresponding intention guides our approach to the interface between the gardens and Marina Reservoir.

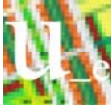


Thirdly, we envision the mobility patterns of the park as extensions of the surrounding urban grids, diversifying their performance and bringing new purposes and activities into the urban fabric. The gardens serve their surrounding communities, and simultaneously establish new nodes of recreation and learning into the larger network of Singapore's urban resources. Instead of seeing the gardens as the antithesis or interruption of urban activity, we see them as bringing variety and intensity to city life. In this way, the gardens contribute to the larger aim of connectivity, and support the ongoing development of public transport systems.

Fourth, each of the three gardens forms part of a coherent circuit of linked waterfronts, but they do so as specifically differentiated gardens. We agree strongly with the guidance in the design brief which suggests that each of the gardens should be responsive both to their adjacent water bodies and their neighbouring urban fabrics. This brings out a diversity of character along the waterfront and sharpens the logic of the larger network. Nevertheless, we would encourage safeguarding the possibility of a future intensification of the waterfront circuit with crossover associations among the gardens. For example, might we bring an educational function to the Kallang Basin with a centre mounting exhibits on sports physiology? Or perhaps complement the pursuit of environmental awareness in Marina South with a centre for the ecology of amphibians in the Gardens at Marina East?

Our fifth principle also clarifies our position on the differentiation of the gardens. We believe that form should be driven by a well-researched understanding of environmental conditions. We work with patterns of sunlight and shade, dominant direction of breezes,





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natural drainage channels, and the diversity of seasons to deliver design that is sustainable, comfortable, and technically intelligent.

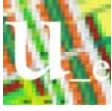
## Concept

Singapore as a city in the tropics has the aim to become a city within a garden. The Gardens by the Bay project gives the city a chance to create a garden at its heart. All great cities have a great city centre park; Central Park, New York; Grant Park, Chicago; Hyde Park, London and the Tuileries Gardens, Paris are among a few. They are all unique and represent each city's culture, heritage and historical position and have evolved to cater for the needs of the dynamic cities that surround them.

The Gardens by the Bay should have the ambition to become the emblematic garden of Singapore. It should aim to embody the concept of a 'City in a Garden' by becoming an integral part of the city. Gardens by the Bay should set new standards for gardens and parks in the future. The Parc de la Villette, Paris and the Millennium Park, Chicago are two contemporary parks that have led the way with new park concepts that have integrated diverse cultural activities. Both these parks however have little horticultural or environmental interest. The Gardens by the Bay should become a major milestone in landscape and urban park design. The concept of a 'City in a Garden', where horticulture and the environment have a major role and are seamlessly combined with cultural, educational, urban and leisure activities.



Marina Bay is at the heart of Gardens by the Bay. It will become the visual and emotional heart of the Gardens and their central feature. However to become the active heart of the Garden it needs to be inhabited. The Gardens will not stop at the Bay, as the Bay will become part of the Garden. The Bay and Gardens will in turn be ringed by the ever expanding city centre, its business, commercial, cultural and residential districts will make the Gardens and Bay their focus.



The aspirations of the city to move from its clearly achieved goal as a garden city to becoming a city within a garden also requires one to challenge what the status and function of a garden should be at the cities heart. Just as the urban fabric of Singapore is softened and dematerialised within its garden context, the popularity of Gardens by the Bay is dependent on its ability to dematerialise its boundaries and merge its identity with the attributes, events and activities associated with the vibrant city that surrounds it. The Gardens should capture the spirit of the place and be the manifestation of Singapore's culture and heritage.

### **Creating a balance between intricate detail and distant clarity**

Singapore's character as a city has very memorable qualities that are shaped by its context, one is struck by its lush tropical greenness, its hot and humid climate envelopes one's body, its distinct trading districts create layers of vibrancy, texture and colour. It is a truly intricate, multi cultural, dense yet spatially permeable city.

As one moves through Singapore, one bridges, tunnels, passes through, over and under layers of activity, this can be a vertiginous experience, where climbing high up a tower, reveals an understanding of one's position in the city, its orientation, landmarks and connections, however on the ground one is immersed in the smells, textures, colours, atmosphere and energy of local habitation.

Our intention is to bring the intricate, multi-layered reading of the city into juxtaposition with its high level moments of clarity, creating a landscape language that is three dimensional in form and experience. One could enter the Gardens via a tunnel from the metro and find oneself in a shady ravine with a footbridge overhead and water trickling down its rocky surface. One could arrive on a footbridge over a busy highway and find oneself on top of a hill with views into landscaped valleys and a cooling breeze. We wish to create a garden that is as spatially and atmospherically rich as the city that surrounds it.

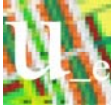
### **Creating a balance between comfort and adventure**

To move from one experience and another in Singapore is done with a purpose, not just to be outside, thus to move with ease enables one to be at one with the cities hot and humid climate. The Gardens will succeed as a popular attraction, if the diverse experiences they offer unfold seamlessly in close proximity to transportation and places of comfort and convenience.

One does not want to travel with ease to the park and then find its pedestrian scale overwhelming. We wish to provide shady covered routes for those areas most easily accessed from the city, but at the same time encourage wider movement throughout the park on fleets of solar-powered water and land based vehicles to attractions that offer levels of convenience normally associated with the city centre.

The experience of the gardens will be enhanced by encouraging movement towards and across the bay. Here coastal winds can pick up speed across its smooth surface, making the waters edge and a boat trip a natural destination and event. Those areas furthest from the Bay's pleasant sea breezes will gain respite from the heat through elevation, sitting in the shade of a tree or canopied tea house, with a view of what is held within the surrounding landscape, and the city beyond.

The evenings being the coolest part of the day when the working day has been completed will require the Gardens to have a layer of interest through the introduction of



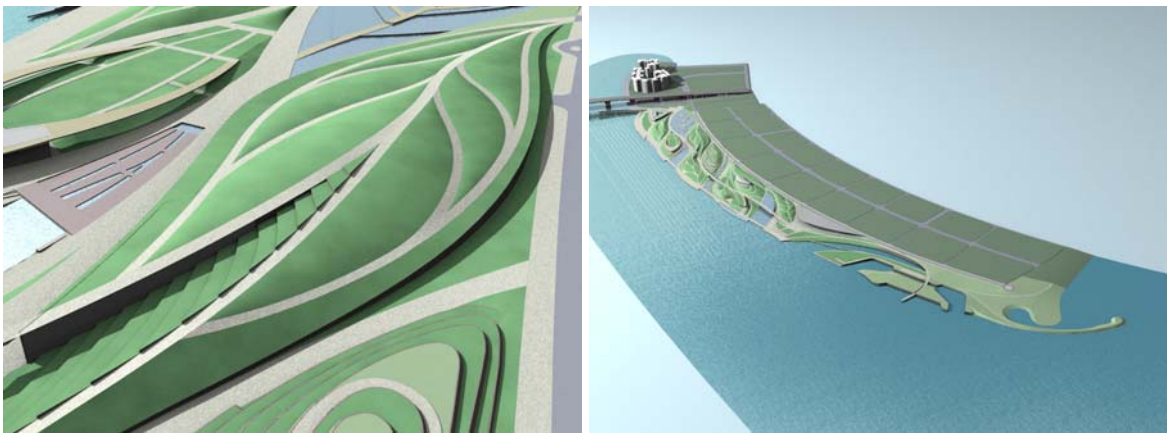
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light, both practical and theatrical heightening the atmosphere of the Garden experience and programmed events.

## **Creating a unique landscape language that is a symbol for and of the city**

To create a balance between intricacy and clarity, rich experiences and casual relaxation, humidity and pleasant breezes requires the creation of a unique landscape particular to Singapore. The three dimensional spatial reading of the city will find its place in the park through sensuous landforms that allude to the lush, green and graphic leaf forms found in the tropics.



Visitors will weave through, over and under its surfaces. Moving through this sculpted undulating landscape with layers of water, light, shade and plants, ravines, valleys and hill tops, will entice visitors to venture further into its depths, before it in turn opens up to reveal the Bay and the shimmering attractions to be explored on all its three shores.

A city's most prominent public garden should be a reflection of how it views itself and a statement of how it wishes to be seen by the outside world. As the principle public space in Singapore, the Gardens by the Bay will lead to the creation of a new identity for the city, a garden that in all its parts will be both comfortable and loved by the city's citizens; Gardens that they will want to pass through, inhabit and use, provide the city with spaces that can inspire imaginative responses, through an ability to provoke thought, enable diverse events and project Singapore as a distinctive city in its region and the world.