



LANDSCAPE DESIGN FOR THE BARNES FOUNDATION

The landscape for the Barnes Foundation on the Benjamin Franklin Parkway in Philadelphia is comprised of a collection of spaces, each with a particular functional, social and aesthetic role. They have been designed in response to a number of important concerns: the civic nature of the site and historic character of the Parkway; the legacy of the horticulturally rich, visually pleasing and spiritually engaging estate created by Dr. Albert Barnes and his wife Laura in Merion, which formed the setting for the architecture and the Collection in the past century; a desire to create an environment that is practical and functional, suited to its urban location and those who will come to work, study and visit the Foundation; the need for an environment that is well-made and sustainable for the institution and community; and finally the aspiration that it be timeless on the one hand and representative of our time on the other.

It is impossible to replicate the expanse and full character of a suburban estate on a relatively small urban parcel of land in the heart of Philadelphia, yet the landscape design for this new campus has created a group of spaces of varying size and character that are planted in contrasting and complementary manner to the institution's location and to each other so as to offer rich sensory experiences that recall aspects of the historic Merion campus. This is done not out of nostalgia, but rather from a belief shared with the founders that advocacy for the aesthetic quality and design of the environment is important to civilization—that it is not an added luxury but fundamental to a well-ordered society, and that landscape and garden design has historically exhibited great craft and high art and therefore is to be cherished like architecture, painting and sculpture. While the majority of the Barnes Collection is now housed on the Parkway in Philadelphia, a school for horticulture and landscape design that they founded remains in Merion, where the Barnes Arboretum, garden and plant collection enter a second century. The landscape for the new Barnes campus in Philadelphia, therefore, has been consciously designed to evoke this historic fact and philosophical position.

Because of the extent and age of the Barnes Arboretum, it was clear that it would be impossible to introduce plants representing the entire collection. Particular aspects of the grounds seemed evocative and served as inspiration for the selection and variety that have been developed in Philadelphia. Key among these are the contrasting collections of conifers and flowering understory trees that frame the southwest lawn at Merion, reflecting Mrs. Barnes's long friendship and correspondence with Charles Sprague Sargent of the Arnold Arboretum in Boston and their avid importation of recently discovered Asian trees, particularly maples, magnolias, dogwoods and chestnuts. Likewise, the placement of particular species such as franklinia at the arrival corner of the Cret building or the unusual and extensive collection of ferns in the Arboretum served as inspiration. A landscape, however, is more than a collection of plants. It contains other physical elements and structures—walls, paths, furnishings, water and landform—that if successfully selected, designed and arranged form a place that has a unique and memorable character. This has been the ambitious goal of the Barnes Foundation and its designers.

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The master plan for what became the Benjamin Franklin Parkway as originally envisioned by Jacques Grebier and his patrons, the leaders of commerce, industry and government of Philadelphia at the time, expected a number of cultural and civic institutions would be built along its flanks to connect the heart of what at the time was one of the wealthiest cities in the nation to the largest municipal park in the country. A landmark scheme of the City Beautiful movement, it was in large part accomplished. Several central elements, however, weren't realized, namely from 20th to 23rd Street only one block attracted a cultural building, the Rodin Museum by Paul Philippe Cret. The Great Depression brought an end to the rest, except for continued work on the Philadelphia Museum of Art at the terminus of the vista. After World War II, several of the empty parcels were developed according to altered social and economic imperatives as well as a radically transformed architectural aesthetic. Residential towers and a jail for children (euphemistically referred to as a "youth study center") were built on several of the empty blocks as the city declined economically during what was in effect the transformation of American industry and global economics.

The decision to remove the painfully inappropriate and struggling Youth Study Center and to replace it with a facility for one of the great cultural institutions of the region set the stage for an ambitious architectural design. The site bounded by 20th Street, 21st Street and Pennsylvania Avenue is a key block on the Parkway, lying between Logan Circle, its Beaux Arts civic buildings and two of Paul Cret's masterpieces of design, the Swann Fountain and Rodin Museum. As a result of its situation, visitors to the Barnes Foundation will arrive from the city and region in several directions. The first consideration of the landscape design, therefore, was to respond with a sequence of spaces that could all lead to a common entry walk of the maximum extent, whether coming from the vehicle court on 20th Street to the east, a parking area and school bus drop-off on Pennsylvania Avenue to the north, Fairmount Park, the Philadelphia Museum of Art and the Rodin Museum or 21st Street on the west or from the Parkway, Center City and Logan Circle on the south and southeast. Although contrasting in size and orientation, each of these approaches is framed by rows or allées of trees different in form, size, color and texture to enhance the experience of arrival and procession and to create an ambience that will assist in shifting the mood of visitors coming from the environment of the city, its noise, distractions and traffic—to induce a receptiveness and prepare visitors to experience art of the highest order in an intimate setting. Each of the entry sequences serves to shift visitors from a more open public, civic space to that of a more intimate, private and personal realm.

The most ceremonial of the arrival sequences and entryways to the Barnes Foundation begins in a small public square reminiscent of familiar Parisian parks that to a significant degree inspired the original design of the Parkway with its impressive ranks of trees including a handsome stand of London plane trees that have been carefully preserved on the Barnes site. This space opens off the corner at 20th Street facing Logan Circle. Here, between rows of flowering horse chestnut trees planted in a terrace of gravel, is located an extended fountain of Canadian granite known as nordic black, in the shape of a broad tabletop plane of water that is furnished with lilies. Generous benches on two levels offer ample seating near the fountain with views of the basin and out to the city and Parkway.

This public space, which serves as a foyer to the rest of the site, ends on the west at a plinth framed by a hedge that extends south from the limestone-clad building toward the Parkway. This raised plinth extends along the front of the Collection Gallery. It is planted with a number of trees and a variety of shrubs and groundcovers rarely seen in public spaces in American cities today and that recall those in Merion, some even in the same relationship to the tall windows of the Gallery, while others are gathered closer. Among the trees are Asian and European chestnuts, magnolias, amelanchiers, dogwood and franklinia, while the shrubs include viburnum, rhododendron, mountain laurel, Carolina allspice, sweetspire and leucothoe, underplanted by a diverse tapestry of ground covers, some of which are periwinkle, ajuga, spurge, phlox, astilbe, sarcococa, sweetbox and hellbore.

This plinth and its planting fulfills several roles. One is to provide a buffer between the multistory tall windows of the south-facing Collection Gallery and the busy pedestrian and vehicle circulation and events of the Parkway, so as to preserve a calm atmosphere and enable visitors to concentrate on the art without distraction. The other motive is to supply as much green as possible outside the windows without constructing high barriers. Matisse is known to have remarked that the color palette he chose for his now-famous lunette murals of *The Dance* that were above the south-facing windows of Cret's original structure was in part a response to the green of the garden beyond in the sun.

From the fountain terrace, a ramp ascends between a series of grassy terraces planted with Deodar cedars that provide a transition to an upper space. Even in their youth these conifers with their full skirts of evergreen foliage offer a dramatic contrast to the spatial character of the forecourt. Over time as they grow to maturity these trees will become majestic, framing a unique volume of space while casting dramatic shadows on the limestone façade to the west. The stone ledges and pavement for the walkway here and elsewhere on the site are made of San Sebastian, a light grey granite with an attractive grain and texture, also from Quebec.

At the top of the gentle ramp, paths from parking and drop-off areas converge at the plaza and a dramatic work of contemporary art, *The Barnes Totem*, by one of America's most distinguished artists, Ellsworth Kelly. Also at this point one encounters another long basin of water, this time at ground level and extending parallel to an allée of multi-stemmed red Japanese maples that lead to a small causeway and the entry to the building. These elements are contained in a tapering outdoor room framed on all sides by architecture. On the south, reflected in the water, is the articulated limestone façade of the building. On the east and west are walls with Boston ivy, while on the north is a wall that is planted with a variety of vines that will form a tapestry of color and texture as they grow and contend with each other. This mixture of twining and clinging vines includes clematis, climbing hydrangea, bignonia, Virginia creeper, Dutchman's pipe and Ionicera. Two other unusual and dramatic trees, katsuras that will go through different color phases each year, have been planted at either end of this space, in part to frame and terminate the horizontal gesture of the walls, basin and maple allée with strong vertical strokes of vegetation.

Another important entryway to the new Barnes Foundation is that of a vehicle court and drop-off accessed from 20th Street. The vehicular portion is paved in granite setts, and the pedestrian walkways around it are paved with the same granite slabs used for the principal walkways and entry from 20th Street and the Parkway. Vehicles and the activity in this space are screened from the maple allée by an evergreen hedge of arborvitae that also separates it from the inclined Deodar walk. A tall evergreen hedge is also used to screen a service area at the other end of the block on 21st Street.

The eastern end of this space is also another distinct entryway to the campus, with an entry ramp and path that leads from the corner of 20th Street and Pennsylvania Avenue as well as a screened parking area. As with the Parkway plinth, the planting openly recalls that of Merion and any number of private gardens in the Delaware Valley. Here the trees are a Japanese cryptomeria, star magnolia, and Korean dogwood, along with a number of broadleaf evergreen shrubs such as winterberry, English laurel, oak leaf hydrangea, summersweet, viburnum and mountain laurel, all found in the Arboretum, along with astilbe, vinca, fothergilla, spirea, sweetspire and other ground covers and perennials. This garden-like planting frames the walkways that lead between the world of vehicles and streets to that of the maple allée and building entrance, offering a transition from the outside world of the city, its pace, noise and traffic, to one that is different from but plays a similar transitional role as that of the cedar walk.

On the west, beyond the wall that terminates the entry walkway space, there is another garden discovered by visitors who go to the Garden Restaurant only after they enter the building. It is entirely enclosed by walls and is designed to provide outdoor dining. Stone-paved terraces with tables and chairs are lightly shaded and framed by a group of flowering trees that include Yellowwoods, pagoda dogwood, amelancier, soulangiana magnolia and a stewartia. In addition to another assortment of shrubs and perennials, this garden also contains numerous ferns, to remind visitors of one of the more remarkable aspects of the plant collection at the Merion Arboretum. These include Christmas fern, Japanese tassel fern, Japanese holly fern, upside-down fern and several wood ferns. The reflecting basin accompanying the entry walk extends into this garden from beneath a wall on the east. The mixed selection of vines found beside the maple walk of the entry sequence continues along the north wall of the garden that screens the parking beyond, with the koulreteria trees of that lot rising beyond.

Two other garden spaces are discovered from inside the building. The first is encountered immediately from the entryway and is seen across the Light Court. Within the Collection Gallery, a vertical space has been created that extends from the lower floor up through the building and is open to the sky. Here one finds planted in a bed of ferns below a bouquet of fastigate ginkgo and sweetgum trees reaching for the sky. The bright gold and vermilion of their leaves will provide a striking note of seasonality in the autumn before they shed their leaves to maximize the light below in winter. As circulation between the rooms of the Gallery passes by on an upper level, a floor-level planter spills winter jasmine out into the shaft of space. At the lowest level an arcade allows visitors to sit outdoors in what amounts to a miniature cloister.

The dramatic Light Court opens to the west onto an outdoor terrace from which one has a view over a parapet railing and evergreen arborvitae hedge to the Parkway and the gateway ensemble of architecture, sculpture and planting of the Rodin Museum beyond 21st Street to the west. Sheltered by the Light Canopy above but provided with plenty of light, a clump of flowering Carolina silverbells emerges from a large wooden platform provided for sitting by an outdoor fireplace. Again as in the public foyer-like space on the Parkway, a generous wooden bench extends along a wall, planted with English ivy.

Because of the strong iconic nature of the Benjamin Franklin Parkway, a lasting and beloved work of the City Beautiful movement of the early 20th century, few people prior to the opening of the new Barnes Foundation were fully cognizant of the importance of the approach from the north and the future character of Pennsylvania Avenue, which extends to the east as Callowhill Avenue. In the gradual process of transformation as a desirable residential street, it will in the future have several tall buildings and their front doors immediately to the north and in both directions. To the east another public park space will occur in conjunction with a new addition to the Public Library currently in design. The streets on all four sides of the new Barnes Foundation site have been refurbished and improved, with new pedestrian pavement and the planting of continuous rows of significant street trees. Pennsylvania Avenue has been planted with a continuous row of willow oaks along the curb. Between the new sidewalk and a parking lot is another row of willow oaks and a continuous hedge of English yew that screens a wall and parapet. A portion of the curbside planter where school busses will load and unload has been paved in granite setts similar to those in the drop-off area. The pedestrian zone of the streets on the east and west of the site has also been refurbished and planted with big-leafed lindens on 20th Street and swamp white oaks on 21st Street.

Visitors who arrive by private automobile will find a partially enclosed parking lot that is accessible via a short ramp from Pennsylvania Avenue. While it is paved in the central drive lane, the parking bays on either side are of gravel containing two more distinctive rows of trees, koulreterias, also known as golden rain trees for their flowers, behind which on the concrete walls one finds English ivy.

Issues of sustainability have also influenced the landscape design. These are most apparent in the choice of materials and the concern for water use. As much as possible of the rainwater that falls on the site, and that is not taken up by the large extent of plantings, will be captured and directed to a cistern for use in irrigation. The water in the basins is re-circulated, and to a certain degree partially shaded by either the building or vegetation, limiting loss to evaporation while providing cooling for people and plants. Water is directed through planted areas and granular materials to aid in filtering and cleaning it.

Paving in the site is composed either of cut granite or decomposed granite, a natural material that has been selected for its remarkable life cycle cost benefit – the longest that is known or achievable if well detailed and installed. Likewise, the metal and wood are of the most durable known, to reduce the need for their replacement or significant maintenance. The vast majority of the trees are long-lived species selected for their appropriateness for the climate and urban conditions, both as they are and as is expected with global warming.

The roof of the building is composed of three elements, each of which contributes to a different aspect of sustainability. These are skylights (a traditional source of illumination reducing the amount of artificial light and, therefore energy, necessary for interior activity); solar panels that provide both shading of the roof surface on the one hand and generate energy for use on the other hand; and plantings, with portions of the roof covered in trays of sedums, which will retain rainfall and act to cool the roof beneath.

While this has been an extensive list of different elements, it should be pointed out that the landscape and the building are one continuous composition. They were developed as a close collaboration between the architect and landscape architect, and they comprise a continuum of spaces that follow similar ideas and attitudes. Beginning with a work session among Todd Williams, Billy Tsien and Laurie Olin in Rome, there developed an overall modern geometric structure inside and out, a sequence of spaces moving first one way and then another that flowed into and through each other—spaces that were large and ample, even stretched, alternating with smaller, more compressed spaces, then back to spaces that give release. Likewise there has been a shared concern for a few rich

and evocative materials used generously, supplemented with smaller and strategically placed instances of more elaborate detail. The flow of materials from outside to inside is amplified by the more figurative development of the three pieces of water that move along with the visitor in the same orientation and animate three major spaces. Each in a different way is an example of this harmony, continuity and shared aesthetic. Finally, both the architects the landscape architect have shown their concern that the building and the gardens pay homage to the earlier work of Paul Philippe Cret and Albert and Laura Barnes, without aping the style and habits of that earlier period, but seeking to make this an exemplary work of our time.