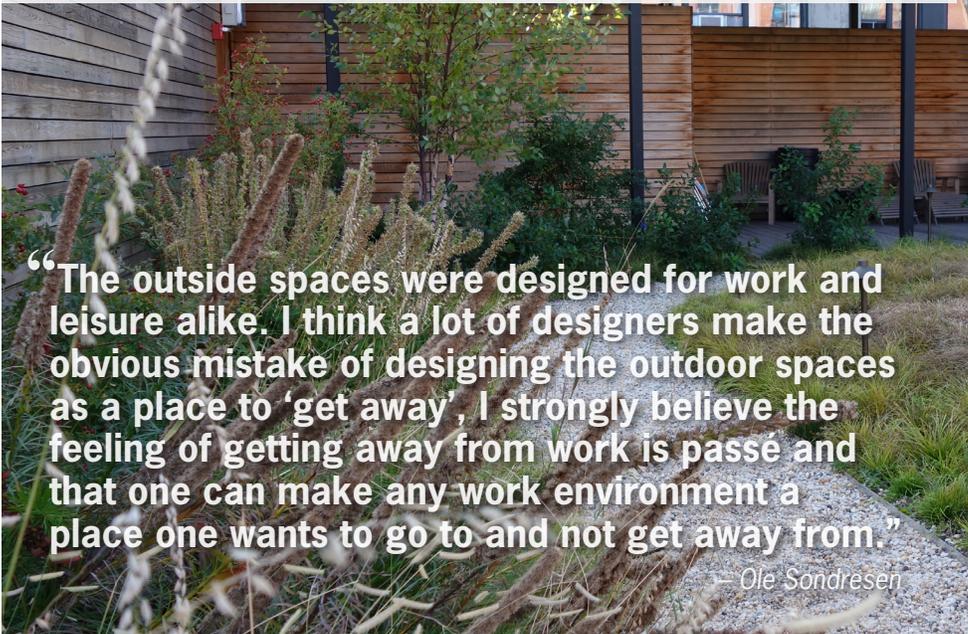


KICKSTARTER

COMMERCIAL HEADQUARTERS



“The outside spaces were designed for work and leisure alike. I think a lot of designers make the obvious mistake of designing the outdoor spaces as a place to ‘get away’, I strongly believe the feeling of getting away from work is passé and that one can make any work environment a place one wants to go to and not get away from.”

— Ole Sondresen

PROJECT SUMMARY

Kickstarter is a global crowd funding platform whose mission is to help bring creative projects to life. When looking for a new building that captures the heart of the company’s culture, Kickstarter chose a former pencil factory in Brooklyn, NY. Designed by local architect Ole Sondresen, the commercial office fills out the entire 29,000 ft² space, including a large green roof. “The existing building was deep, dark and partially below grade, which meant it had very little daylight or potential for fresh air.” Ole Sondresen noted, “The solution was to carve out a courtyard, a very ‘renaissance palazzo’ idea, as this building is surrounded by industrial buildings. It was in need of a sense of interior relief for the user to connect to the outside.”

By intuitively employing several patterns of biophilic design, Ole Sondresen Architect created a dramatic, contextual commercial office and headquarters with daylight, natural materials and textures, and views to outdoor gardens.

With floor to ceiling curtain walls, high ceilings, a two story central courtyard with a rain garden, and an 8,500 square foot rooftop landscape mimicking the region’s natural ecology, the space has been reconstructed to

promote a healthy, dynamic work environment with a strong connection to nature.

This case study explores the strategies used to establish a biophilic experience, including: material choices, alterations to the building’s existing form, and thoughtful exterior green spaces. The design creates an engaging space, one that supports Kickstarter’s strengths and culture, while promoting the creativity, productivity, and well-being of its employees.

Location

New York, USA

Project Address

58 Kent Street, Brooklyn, NY 11222

Project Type

Commercial, Class A Office

Square Feet

29,000 sq ft

Year of Completion

2014

Occupant

Kickstarter

Design Team

Ole Sondresen Architect

Keywords

Historic building, renovated factory, greenroof, natural landscaping, reclaimed materials, central courtyard

Features of Note

Architectural Digest
Arch Paper
Inhabitat

Biophilic Patterns

Non-Rhythmic Sensory Stimuli
Material Connection with Nature
Connection with Natural Systems
Prospect & Refuge

Prepared by Cory Nestor and Terrapin Bright Green; All images © Ole Sondresen Architect.

Above: The rooftop garden includes Refuge spaces off the main path for occupants to use. The garden has edible plants, as well as species that support migratory birds and butterflies.

P1 P3 P6 P7 P11 P12

NATURE IN THE SPACE

- [P1] **Visual Connection with Nature.**
Views to the outdoors from all three floors and every work desk
- [P2] **Non-Visual Connection with Nature.** Moving grasses, edible berries, edible garden plots
- [P3] **Non-Rhythmic Sensory Stimuli.** Native landscaping sets the stage for non-rhythmic sensory stimuli, with occupants on each floor with direct view of native landscaping
- [P4] **Access to Thermal & Airflow Variability.** Glass garage door connecting sunroom and greenroof porch, operable windows in the office
- [P5] **Presence of Water.** Weather responsive water retention courtyard and downspout
- [P6] **Dynamic & Diffuse Light.** Natural light from the courtyard, sunroom, and exterior refurbished windows
- [P7] **Connection with Natural Systems.** The central courtyard and greenroof's native landscaping rainwater capture and retention in the courtyard

NATURAL ANALOGUES

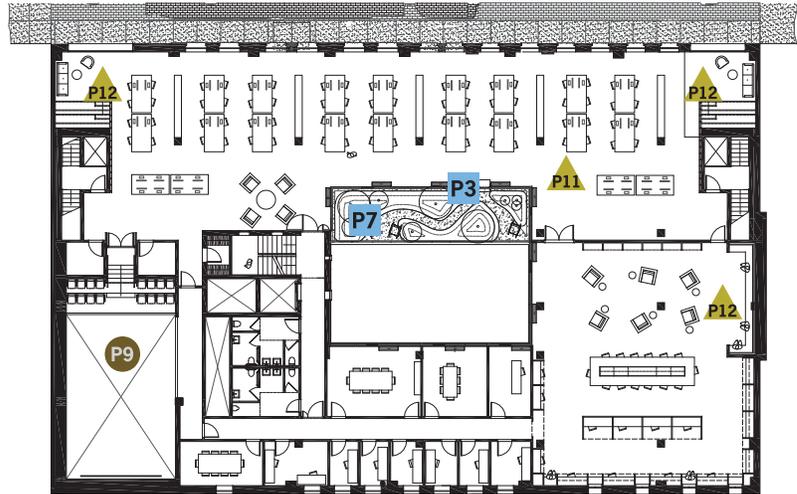
- [P8] **Biomorphic Forms & Patterns.** Fractal patterns in the reclaimed heart pine finishes
- [P9] **Material Connection with Nature.** Interior doors and details as well as desks and seating are made of salvaged or local materials
- [P10] **Complexity & Order.** Library bookshelves

NATURE OF THE SPACE

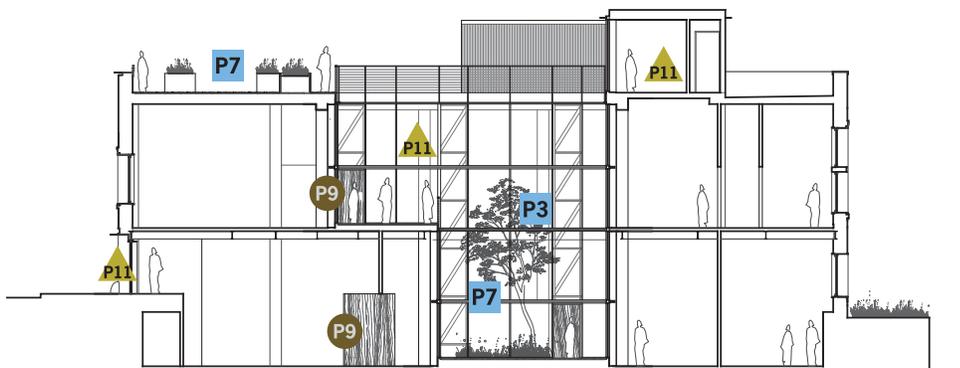
- [P11] **Prospect.** Views into the central courtyard and over the greenroof provide prospect conditions with focal ranges greater than 20 feet
- [P12] **Refuge.** Reading nooks, cubbies, and high-backed chairs
- [P13] **Mystery.** Not significantly represented in design
- [P14] **Risk/Peril.** Views from the third story sun room into the courtyard

Plan: The office includes many patterns of biophilic design. The courtyard and green roof are significant architectural design strategies that promote both visual connection with nature and dynamic and diffuse light within the interior.

Section: A central courtyard cuts through the building and provides dynamic and diffuse natural light and access to the outdoors.



SECOND FLOOR PLAN



LATERAL SECTION
[P7]
CONNECTION W/ NATURAL SYSTEMS

Throughout the design process, Ole Sondresen and his team worked to connect the building and its occupants to the natural environment. The design highlights **natural processes, especially seasonal and temporal changes characteristic of a functional ecosystem**, which reinforces occupants' cultural appreciation of the environment and positively affects their health.

In the same way the building is responding to its local ecosystem, the ecosystems of the courtyard, terrace, and rooftop were chosen to respond to the specific solar orientations. Species at the base of the low light courtyard include river birches, ferns and other shade and water-loving species, while the rooftop plants are native, sun-loving varieties. The mid-level terrace has tall deciduous bushes which provide shading for the office interiors in the summer. The landscape design further encourages seasonal interactions with an edible garden that helps keep occupants connected to where food comes from.

The tiered courtyard and rooftop gardens were designed to mimic lost habitats that were once so plentiful throughout Brooklyn. The lowest court is actually a shady rain garden where the building captures water from the rooftop to create periodic flooding. By capturing the roughly 4" inches of rain that the building receives monthly, the courtyard recreates the wetland habitat once common to the region. Leveraging this temporal event is a practical and effective application of the Connection with Natural Systems pattern. Using the unique form of the courtyard as a rain reservoir lets occupants witness site-specific natural processes and cycles, while supporting natural habitat and biodiversity.

With operable windows and doors on each floor of the building, occupants have both visual and physical access to these natural systems. While these landscapes are man-made, their function mimics that of a natural ecosystem, offering lower maintenance and bringing greater awareness of seasonality and dynamism of natural systems.



[P3]
NON-RHYTHMIC SENSORY STIMULI

A benefit of supporting local ecosystems on every floor is connecting occupants to the dynamic characteristics of these systems. The use of native, site-specific vegetation provides habitat for local and migratory species, including birds and insects.

The **stochastic and ephemeral movements** of the flora and fauna add complexity and intrigue to the experience of the environment. Moving grasses, falling leaves, fluttering butterflies, and the occasional birdsong create brief distractions for building occupants providing periodic for the eyes and mind.

Floor to ceiling curtain walls allow occupants to experience this changing landscape from their desks and common spaces. Every space, except the blackbox theater, is designed to have either a direct or oblique relationship with at least one of the courtyards or the rooftop.

Speaking to Sondresen on the importance of species integration, he noted, "NYC is smack down the middle of the Atlantic flyway and supporting migrating birds is best done by creating green islands with food scattered throughout the concrete jungle of the city." The rooftop is deliberately planted with species that support birds and butterflies as well as humans.

Left: The courtyard and second floor terrace provide a setting for Non-rhythmic Sensory Stimuli including migratory birds, tall flowing grasses, and conditional water capture.

P1 P3 P5 P6 P11



[P9]
MATERIAL CONNECTION W/ NATURE

Natural materials play an important role in the structural elements and design finishes of the building. Innovative reuse of materials from the existing site provided opportunities for incorporating materials that, **through minimal processing, reflect the local ecology and geology, creating a distinct sense of place.**

Reclaimed wood from the previous building had been local in origin. "Barns in this area were constructed of a medley of woods as the settlers would clear the land for the fields and use the different species of trees for what they served best. For instance, hardwoods like oak were used for the structure, rot resistant woods like hickory and cedar were used for the siding, and so on."

Where wood was required to be dimensionally stable (doors, window frames, etc.), Sondresen and his team specified locally-sourced salvaged heart pine (old beams tossed away to make way for steel c-joists). Exposed nested fractals within the heart pine doors reinforce a material connection.

For the blackbox theater, Sondresen wanted to use a very dark wood, so vinegar and steel wool were used to oxidize (i.e. blacken) the reclaimed oak. "No stains, no VOCs, no mess, as oxidizing is simply the natural tannins of the wood darkening!" he explained.

Right: The 2nd floor library offers both Prospect views and Refuge conditions. Reclaimed heart pine used for interior doors throughout the office provides Material Connection with Nature.

P1 P6 P11 P12

[P11+12]
PROSPECT & REFUGE

Understanding that Kickstarter needed an office with an assortment of spatial conditions to respond to office and occupant needs, the designers distributed a mix of open office floor plans and small, sheltered work and study spaces throughout the three floors.

The building geometry supports a hierarchy to the prospect condition, with a variety of **unimpeded views over a distance for surveillance and planning.** The open floor plan on the main floor provides views out over the interior work environment, and to the courtyard in the center of the building. On the second floor, there are views into the main work areas, the balcony terrace, and across the central courtyard. Finally, the rooftop has extended prospect with sightlines down into the courtyard and work space, as well as out to the surrounding buildings and skyline to connect occupants to the larger neighborhood.

To contrast the strong prospect conditions, the designers introduced refuge spaces, **with protection overhead and to one's back.** "...some work is social, and some work is study," Sondresen noted. "The grand library is a social commentary/experiment as much as an "amenity". Some work requires a quiet and contemplative environment and some work requires a place of action and engagement. The library is a place to squirrel away for a while and hatch those genius thoughts that are the foundation of a business like this." The balance of prospect and refuge varies in response to the needs of the workplace and its occupants.

HEALTH BENEFITS

Sondresen's intuitive implementation of the biophilic patterns has the potential to provide the following benefits to occupant health and wellbeing:

[P3] Non-Rhythmic Sensory Stimuli.

Positive impact on heart rate, systolic blood pressure, and sympathetic nervous system activity; observed and quantified behavioral measures of attention and exploration.

[P7] Connection w/ Natural Systems.

Enhanced positive health response; shifted perception of environment.

[P9] Material Connection w/ Nature.

Decreased diastolic blood pressure; improved creative performance and improved comfort.

[P11] Prospect.

Reduced stress, boredom, irritation, and fatigue; improved comfort and perceived safety.

[P12] Refuge.

Improved concentration attention and perception of safety.

Individuals and teams have different work styles and different workplace needs throughout the day. Prospect and refuge spaces are common in work environments, and for good reason. Research shows refuge spaces increase concentration, attention, and perception of safety, while prospect spaces reduce stress, boredom and fatigue, and improve comfort and perceived safety. Having a balance between the two patterns is suggested to be more important than the size or frequency of the feature. By incorporating both refuge and prospect spaces in their new headquarters, Kickstarter ensures that their employees have places to do a variety of work activities comfortably and effectively.



COMPETITIVE ADVANTAGE

Kickstarter's mission is to bring creative projects to life. By investing in a space that supports the health and wellbeing of their employees, Kickstarter enables its employees to work as well as possible to bring the mission to life. Elements such as the regionally-appropriate green spaces, reclaimed wood and natural finishes, and diversity of prospect and refuge conditions throughout the building are fantastic examples of biophilic patterns that have the potential to reduce stress, improve cognition, and create comfort.

With this unique space, Kickstarter has joined the many leading corporations that recognize how good workplace design can help their employees be more productive and innovative. For a company that relies on the creativity and hard work of its employees, having a healthful biophilic office gives Kickstarter a key advantage.

The headquarters also support Kickstarter's commitment as a Benefit Corporation, meaning that part of how Kickstarter measures success is based on their impact on society and commitment to their values. Their charter includes a commitment to minimizing

their environmental impact, which is evident in the design of the office. Sondresen and his team salvaged wood for the project, and repurposed the steel trusses from the temporary roof on the building as vertical supports for all the glass around the tiered courtyard. The very efforts that were intended to be environmentally and socially responsible and cost effective also support the biophilic experience of the space.

By renovating an existing building, using locally-sourced and salvaged materials, and investing in a beautifully designed space connected to the natural environment, Kickstarter is reaffirming its commitment to this sustainable vision for people and the planet.

Right: The 3rd floor overlooks the central courtyard and green roof and provides Prospect, while the adjacent porch provides partial Refuge. Additional patterns include: Visual Connection with Nature, Non-rhythmic Sensory Stimuli, Dynamic and Diffuse Light, Risk/Peril, and Material Connection with Nature.

P1 P3 P6 P9 P11 P12 P14



Terrapin Bright Green

Terrapin Bright Green is an environmental consulting and strategic planning firm committed to improving the human environment through high performance development, policy, and related research. In order to elevate conversations and help break new ground in thinking creatively about environmental opportunities to shape the outcome of large-scale planning and design projects around the world. Visit us at www.terrapinbrightgreen.com

Ole Sondresen Architect

Ole Sondresen believes architecture is about building sustainably, for the user and for the future. Good design for us is choreographing the movement and activities of the people ultimately using the space; what they see, what they hear, what they smell, how they move, how they feel and how the program components function individually and as a whole. All photos and illustrations courtesy of Ole Sondresen Architect. Find their work at www.olesondresen.com.