

rana creek

LIVING ARCHITECTURE

An integrated approach to the design
of site, structure, landscape and watershed



Rana Creek Living Architecture, a division of Rana Creek, specializes in the design of sustainable sites and vegetated structures. We are a leading influencer specific to ecological design, addressing the changing paradigm of architecture, landscapes, engineering and building technology. Our team of ecologists and designers connects nature with design—organic life with inanimate structure and innovation with preservation. Rooted in the principles of biological diversity, Rana Creek Living Architecture approaches the built environment as a connected ecosystem—taking into consideration first and foremost bioregional characteristics and environmental impact. By creating integrated and adaptive vegetated solutions to stormwater run-off, water harvesting and reuse, aesthetic impact, and habitat mitigation for native wildlife, we integrate structure with site, site with landscape, and landscape with watershed.

Living Roofs

Although known industry-wide as “green roofs” or “eco-roofs,” Rana Creek Living Architecture refers to our rooftop vegetated systems as “living roofs” in order to account for seasonality and reflect our design process, which begins with natural analogues. Living roofs and walls

decrease stormwater run-off, provide insulation, attenuate sound, and integrate living vegetation with the built environment. The roof components include: roof seal and root protection course, drainage and water retention system, plant and soil material. Drainage and optional irrigation systems that often integrate with stormwater conveyance to living walls, ground level bioswales, percolation basins and/or microtopography designed to filter and transport water throughout the site.

Sustainable Landscapes

Sustainable landscapes allow for seasonality, encourage habitat diversity and manage stormwater on-site. Our design team creates landscapes that are regenerative and self-maintaining, integrating contemporary hardscape design with water capture, filtration and storage systems. Rana Creek Living Architecture specifies native plant material that benefits wildlife, energy use, pollution mitigation, and water conservation.

LEED® Consultation

United States Green Building Council Leadership in Energy and Environmental Design. The LEED Green Building System is a voluntary, consensus-based

national standard for developing high-performance buildings. Rana Creek’s ecological design addresses a number of categories including, but not limited to: sustainable site assessment, stormwater management, protection of greenfields and natural resources, restoration of damaged areas to provide habitat and promote biodiversity, reduction of heat island effect, water efficient landscaping and innovative wastewater technologies, and use of rapidly renewable building materials and products made from plants.

Services

STRUCTURE AND SITE DESIGN

- Vegetated Structures Consultation (Conceptual Drawings—Construction Documentation)
- Living Roof Built-Up System Specification (Waterproofing Membrane—Plant Material)
- Structural Load Calculations
- Soil Medium Specification including Organic Amendments
- Roof and Groundplane Hardscape, Water Feature Design and Specification
- Sustainable Materials Consultation
- Cost Analysis
- Construction Administration





Image courtesy Chong and Partners

- LEED® Consultation (USGBC's Leadership in Energy and Environmental Design)

WATER DESIGN

- Sustainable Stormwater Management
- Irrigation Design Integrating Rainwater Harvesting, Greywater Re-Use, and/or Traditional Source
- Drainage Consultation (Roof Details, Microtopography Design, "Green Grading" Landscape Plans)
- Water Retention/Infiltration Design (Bioswales, Constructed Wetlands, Rain-gardens)
- Erosion Control Consultation (Hydroseeding, Restoration)
- Watershed Planning
- Water Conservation Planning

ENVIRONMENTAL DESIGN

- Assessment of Bioregional Environmental Conditions
- Planting Plans and Details (Native and/or Drought Tolerant Plant Material Selection)
- Establishment and Long-Term Ecological Maintenance Specification
- Contract Grow Specifications
- Life Cycle Assessment
- Simulation Modeling

Partial Client List

Bolton Design, Reisman Residence
Carmel, California

City of Vancouver, Vancouver
Convention Center
Vancouver British Columbia

Feldman Residence
Big Sur, California

Ferar & Associates, Kistler Winery
Sonoma, California

Fernwood Cemetery
Mill Valley, California

Geoffery Holten Associates
Evans/Tarne Residence
La Honda, California

Mickey Muenig, Esalen Institute Baths
Big Sur, California

Lightner Residence
San Francisco, California

LMS Architects, Martin Residence
Marin, California

LMS Architects, Nueva School
Hillsborough, California

Mickey Muenig, Post Ranch Resort
Big Sur, California

Paul Murdoch Architects
Council District Nine City Hall
Los Angeles, California

Peter Walker and Partners
Stanford University Medical Center
Palo Alto, California

Renzo Piano Workshop, Chong
Partners & SWA Group
The California Academy of Science at
Golden Gate Park
San Francisco, California

Sim Van der Ryn Architects
Private Residence
Freestone, California

Tally Ho Inn
Carmel, California

William McDonough Architecture, GAP
Inc. Headquarters
San Bruno, California