



















VanMechelen Architects

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FIRM PROFILE

Architect

VanMechelen Architects is an architectural design firm with a practice in Berkeley, California. We focus on environmentally-responsible design, and our projects include a variety of alternative building materials and healthy practice designs, including solar-oriented houses, schools and institutional buildings.

Our work involves the integration of building systems and materials with the need to provide healthy and safe environments while respecting natural systems. We create buildings that utilize passive and active solar energy, renewable and resource efficient building materials, and interior spaces that promote human health through daylighting, natural ventilation, and good indoor air quality. We have done work for several clients with chemical injury, and are especially sensitive to the need to reduce the toxic chemicals found in many building materials. Our projects also utilize alternative building materials, such as strawbale and earthen construction, as well as salvaged and sustainably harvested wood, and spray cellulose insulation, made from recycled newspaper. Our work includes residential, commercial, and institutional projects.

The design approach is another unique aspect of our work. To create a design that truly meets the needs, it is critical that the client actually be involved in the design process. This works best with a multiple step process of site analysis and synthesis, in which the client is an active participant in the work. The first step involves analysis to develop a more complete understanding of the physical, social, and spiritual characteristics of place. The design is then created through an interactive working process, with paper cut outs and clay, to develop the planning and the forms for the design. The client is active member in the design, and the Architect's role is somewhat akin to facilitator. In a group process, it is beneficial to all parties that the entire Community participates in this process, as it is in the collective atmosphere that all voices can be heard, and that the true qualities of the situation can be learned. Many do not understand the value of their own contribution, and important insights often come from the least outspoken among us.

We are the co-author of the Revised Master Specifications for Lawrence Berkeley National Laboratory, which incorporates a variety of resource-efficient and waste minimizing materials and techniques. Greg VanMechelen was also the Resource Efficient Building Consultant to the City of San Francisco, advising their Public Works Departments, including Architecture and Construction Management, on Green Building Practices.

Mr. VanMechelen serves on the National Board of Architects/ Designers/ Planners for Social Responsibility (ADPSR), and is Chair of their Northern California Chapter. He is a founding member of the California Straw Building Association (CASBA), on the Board of Berkeley EcoHouse, and also on the Advisory Board to the Sustainable Business Alliance: Berkeley (SBA:B), and Project Green Team. He is co-founder of the Berkeley Green Resource Center, a joint project of ADPSR and SBA:B.

He is also co-author of Building Less Waste, a manual for environmental building practices, and the ADPSR West Coast Architectural Resource Guide. He has written several articles, and presented Green Building Techniques to the General Services Administration and other Federal Agencies, and at numerous universities and conferences.



1117 Virginia Street, Berkeley, CA 94702 (510) 558.1075 fax: (510) 558.1076 info@vanmechelenarchitects.com www.vanmechelenarchitects.com

Greg VanMechelen

Architect

Greg VanMechelen is a licensed architect with more than 18 years of professional experience. He is also concerned with the environmental effects of architecture on both global and human health. He can provide design, construction and material choices that promote good use of limited natural resources, while creating non-toxic environments that increase user productivity and enjoyment. He is on the local and national boards of Architects/ Designers/ Planners for Social Responsibility, and is a co-author of their *Architectural Resource Guide*.

Professional Experience

1992-Present Greg VanMechelen, Architect, Berkeley, CA

1986-1992 Stone Marraccini Patterson Architects (now the Smith Group), San Francisco, CA

1984-1986 Hoffman O'Brien Levatich & Taube, Ithaca, NY

Partial Project Experience

- 2006-7 **Berkelely Zero Waste Transfer Station, Berkeley, CA:** Master Plan Proposal to redevelop 7 acre site into new 85,000 sf Material Sorting and Processing Facility, and 15,000 sf Office Building. Project features passive and active energy generation and on-site water reclaimation.
- 2003 **California Conservation Center, Berkeley, CA:** Addition and remodel for Recycling Center Offices featuring a variety of salvaged, recycled, and renewable materials.
- 1999-2000 **Urban Ore EcoPark, Berkeley, CA:** Industrial Retrofit and Remodel incorporating salvaged elements and environmentally-preferable materials.
- 2002 **California Vipassana Center, North Fork, CA:** Meditation Pagoda and residential units using passive solar design, strawbale construction, and numerous natural materials.
- 2005-6 **Waldorf School of Mendocino County:** Master Plan for 4 acre campus and design for new Eurythmy/ Music Hall, Classrooms, Early Childhood Education, and Administration.
- 2004 **Shorebird Park Nature Center, Berkeley, CA:** Education Center with strawbale construction, solar design, and alternative and recycled content materials.
- 2004 **Meadowbrook Waldorf School, East Kingston, RI:** Master Plan for 28 acre campus and design for new Grade School and Early Childhood Education Center.
- 1997-1999 **East Bay Waldorf School, El Sobrante, CA:** Master Plan for Upper School, Gardening/ Craft Structure with strawbale construction, earthen floors, and salvaged lumber.
- 2006-7 **The Prospects at Pacifica:** Master Plan and design for 34 new environmental residences on an 11 acre site. Project features passive solar design, water reclaimation, extensive landscaping, ecological building materials, and site strategies to minimize the impact of the automobile.
- 2006-7 **Oakland Noodle Factory:** Design for renovation of 1918 structure into 11 Work-Live affordable housing units and new Performance Space, Rehearsal Space, and Café. LEED Silver Rating.
- 2006-7 **Homsy Residence, Lake County, CA:** Two new strawbale residences with passive and active solar design, radiant heating, natural and salvaged materials.
- 2004 **Abrams Residence, Cloverdale, CA:** New strawbale residence with passive and active solar design, radiant heating, natural and salvaged materials.

Related Public Speaking (partial listing)

KQED Forum, KPFA, KNBR, KFOG, KSAN radio; Bioneers, Sacramento Municipal Utility District, General Services Administration (Chicago and Washington DC), Sandia National Laboratory, Princeton Plasma Physics Laboratory, Argonne National Laboratory, Lawrence Berkeley National Laboratory, Fiber Futures Conference, San Francisco Institute of Architecture, Sierra Club, Natural Building Network, Solar Energy Exposition and Rally

Professional Organizations

ADPSR, NorCal and National Board, Co-chair, Education and Resources Committees; Berkeley EcoHouse, Co-chair; Berkeley Green Resource Center, Co-founder and Advisory Board Member

Professional Registration

Licensed to practice Architecture in California and New York.

Education

1984 Cornell University, Bachelor of Architecture











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Shorebird Park Nature Center, Berkeley, CA

The first municipally-owned strawbale structure in California, Shorebird Park Nature Center provides education about the San Francisco Bay environment. The City wanted the building to be a showcase of environmental design and technologies.

In addition to the super-insulating strawbale walls, the building features passive solar design, a building-integrated grid-tied photovoltaic system and solar hot water heating. All wood for the building is from FSC-certified sustainable forests. The concrete uses 50% Flyash, a waste material from coal combustion. Interior walls are made of compressed straw, and ceiling panels are straw particleboard. All doors were salvaged and retrofitted with energy efficient glazing.



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A large covered outdoor classroom provides additional teaching space. A perimeter gravel bag wall provides durable seating for children and enclosure to the exterior space. Large double doors open the interior space to the exterior for larger events. A trellis on the south side provides shading from the sun.

The central tower is the unifying mass in the composition, and provides passive heating through a large, south-facing window, and passive cooling with high, operable windows.

Building-integrated photovoltaics were chosen for their durability and resistance to potential damage in a public park.











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The interior space is light and airy, with an exposed structure and wheat straw ceiling panels with wood battens. A fan in the tower assists with moving the warm air - evacuating in the summer or recirculating in the winter.

The utility room is available for public viewing, to show the components of the radiant floor heating, and the inverter and meter for the photovoltaic electric system.

The window sills are made from locally-sourced recycled glass mixed with a mineral-cement binder.

The floor is made of natural linoleum cut by the owner into the shape of the San Francisco Bay.









Straw bales were chosen as the most appropriate material for an environmental showcase building. A waste product from agriculture, straw is typically burned. Rice straw is very abundant in Northern California, and is particularly resistant to fire, rot, and insects. In addition, the bale wall has a very high insulating value, approximately three times the insulation required in this climate.

While load-bearing strawbale walls are used in some parts of the country, most California structures use a wood frame with strawbale infill. The strawbale walls were raised over a weekend with volunteers from the community. The bales are stacked in a running bond, trimmed with a bale saw or electric weed trimmer, and are encased in a metal mesh before plastering.

Metal diagonal straps provide resistance to forces from wind and earthquakes. More recent research has shown that the bales, with a heavy gauge mesh and plaster, provide sufficient strength and the metal bracing can often be eliminated.



Gardening/ Woodworking Classroom East Bay Waldorf School El Sobrante, CA





The first element of a long term Master Plan, the Gardening Classroom reflects Waldorf School values and their unique teaching method.

The Building is a series of gestural movements, going beyond the static nature of most structures, to better support the learning within.

Major materials include strawbale walls, wood from salvaged sources, lime plasters, and a floor made from local soil, sand, psyllium husks, and hemp fibers, sealed with natural linoleum.





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East Bay Waldorf School Remodel El Sobrante, CA

joint venture with Christopher Day, architect, and

Davidson + Seals Architects

An intensive Workshop established design patterns and ideas for remodeling an existing derelict school building, determined the site and created an early study model for a future Upper School.

For the existing building, we created new circulation patterns, and sketched methods for enhancing natural light while softening the harsh rectilinear forms of the original design.



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The Central Courtyard builds community, while an engaging sequence of steps and platforms, enhanced with a running watercourse with flow forms, connects the Upper and Lower School on a sloping site.



The organic forms of the buildings were designed to blend into the surrounding landscape while maximizing natural light, and providing passive heating, cooling and ventilation.



The East Bay Waldorf School sits on an 11 acre hillside site, with an existing 1950's era public school, adjoining a regional park. We conducted several intensive Workshops with the School Community to design the Upper School, shared Library, Public Auditorium, Music Hall and Eurythmy Room, as well as administrative functions.



consensus design workshop

view approaching Upper School

Upper School, East Bay Waldorf School, El Sobrante, CA

joint venture with Christopher Day, architect, and Davidson + Seals Architects



clay massing model from 2 day workshop



Remodel of 30,000 square foot Materials Processing Facility, including Site Design for Materials Yard and related industrial operations. The Project completed construction in Fall 2003.

The Project begins with salvaging and under utilized steel processing plant in West Berkeley, which was seismically upgraded. Existing and functional features are displayed wherever possible.







Facility Site Plan Showing separation of Materials Flow from Public.



Products include flyash concrete, recycled content steel, salvaged doors and windows, recycled wood siding, recycled cotton insulation, salvaged toilet partitions and bathroom tiles.

Bathroom fixtures, partitions, accessories, and tiles were all from salvage

Whimsical use of wood siding and salvaged metal



Extensive planning was needed for the diverse departments. Phase 2 will have Offices and Tenant Spaces on the upper floor



Design of a 7.200 square foot micro-brewery and restaurant in Senta Rosa, California.

Meadowbrook Waldorf School East Kingston, Rhode Island

joint venture with Christopher Day, architect

The MeadowbrookWaldorf School sits on a 28 acre wooded site. We conducted several intensive Workshops with the School Community to create a Master Plan, design the Grade School, Upper School, Early Childhood Education, Public Auditorium, and Eurythmy Room, as well as administrative functions.

We began our 2 week process by meeting with 25 members of the School Community to learn the nature of the site and establish guiding principles to develop the site. We took a silent walk of the property, followed by explorations into the site features, history and biography, gestures and moods, and finally statement of the "genius loci", or inherent nature of the site.

The design exploration was followed by intensive design workshops to establish the characteristics of development, including flow patterns, spatial relationships, and specific siting.

This was followed by specific designs for the entire site, and schematic plans, sections, and elevations for the Early Childhood Education and the Grade School.

California Vipassana Center NorthFork, California

(Joint Venture with Siegel & Strain Architects)

Facilities for this remote Meditation Center include a circular Pagoda, separate Men's and Women's Housing, a small Interview Room/ Dhamma Hall, and Bath Block.

The Architectural Program included using as many natural materials as possible, and incorporation of passive heating and cooling systems. The Pagoda uses strawbale construction, while the housing minimizes wood use through optimum framing techniques.

Cesar E. Chavez Education Center Oakland, California

VBN Architects, Prime Architects VanMechelen Architects, Environmental consultant

The vision for the new Fruitvale/San Antonio Elementary School is a state-of-the-art, sustainable, student centered school with programs, facilities, turf fields, hard court, and play apparatus areas available to the community after school hours. The program is expected to include 29 classrooms, a library media center with computer lab available for community use/ education, administrative areas, a large multipurpose room with adjacent music room and community, as well as school kitchen and an outdoor amphitheater. 45-60 parking spaces, and an ample safe drop-off zone will be accommodated. This new school includes a separate early childhood education (ECE) facility for 68 children accessed off 29th Avenue. The intention is to maximize community use and create an enriching cultural environment for the "whole child," emphasizing early childhood education, day care and extended care aspects, as well as adult education, culminating in a new symbolic "heart" for the neighborhood.

California Conservation Center, Berkeley, CA

The project is a 1200 square foot addition and 600 square foot remodel for the offices of the Berkeley Recycling Facility. The design includes a showcase for a variety of recycled and environmentally considered materials, while dynamic forms maximize interior daylighting. Products include salvaged wood, flyash concrete, recycled metal shingles, insulation from recycled newspaper, plastic lumber, and insulating blocks made from recycled polystyrene.

The Building forms reflect the dynamism of the recycling process. The Project will also give something back to the Community with exterior shelves for Public Art feature to display locally made artwork from recycled materials on the busy, industrial Gilman Street.

The Canopy at the Buy-Back Window is made from salvaged automobile hoods.

Counter -

Plan and cross section

View from the east. The storage room is to the right.

Material durability and low maintenance were critical factor for this 400 square foot toilet and storage structure in a public park. At the same time, the clients wanted to make showcase of recycled and environmentally considered materials, and to use a design and materials that could be erected by the local community.

The form provides natural light to all the interior spaces. A central bearing wall separates the toilets from the storage room, and simplifies building the structure. The walls are rammed earth, and the roof is standing seam metal with integrated photovoltaic panels to power the lights.

Glass windows were avoided due to security concerns. Openings to the toilet areas are high to ensure privacy, while large openings in the sink area will have security bars fabricated by a local artist from scrap metal. In addition to low-flow toilets, there will be a waterless urinal which saves water and has less maintenance..

Bella Vista Park Rest Rooms, Oakland, CA

View from southeast. The black strips in the roof are building-integrated photovoltaic panels.