

From Brownfield to Greenfield

Wellesley, Massachusetts, U.S.A.

Wellesley College planned a revitalization of an area called the Alumnae Valley. During the initial years of the college's development, the valley was a neglected remnant of that original landscape. Neglect soon became indifference, and in the ensuing decades the valley became the site for the college's physical plant, industrialized natural gas pumping, and a parking lot over a toxic brownfield.

During the early planning stages, the 175-car parking lot was viewed as a potential center for new campus development. However, the siting of a campus center to the north and a newfound focus on the pedestrian experience heightened the importance of keeping the valley natural. It was decided the parking lot would be relocated to a future underground garage.

Removal of the asphalt parking lot promised to exhume the contaminants, as did excavation for new structures. Hazardous soil was dealt with through two ways in the design: total removal and localized management. Heavily

toxic soil was located, excavated, and removed offsite for treatment. A pocket of contaminated liquids, a byproduct of natural gas processing, was found beneath the parking lot and regularly collected there. Pumping infrastructure was incorporated into the design, and toxic residue was periodically removed for treatment.

Capped with clean fill, mildly contaminated soils could be kept on site and used as fill for a trio of meadow-planted, drumlin-like mounds. As a result, the entire site was raised six-feet above the previous ground level, and a new wetland was created. A geosynthetic clay liner was used to seal contaminated soils and prevent water from prematurely returning to the original water table.

The wetland — the central design element — helps manage excess stormwater, store excess carbon and provide habitats for multiple species of plants and animals. Almost immediately after construction, meadows appeared and cattails sprouted along the water.

Project Resources

ARCHITECT

Mack Scogin Merrill
Elam Architects

CIVIL ENGINEER

Vanasse Hangen
Brustlin, Inc. (VHB)

GEOTECHNICAL ENGINEER

Haley & Aldrich, Inc.

GENERAL CONTRACTOR

Richard White Sons, Inc.

SOIL SCIENTIST

Pine & Swallow Associates, Inc.

SITE CONTRACTOR:

Maxymillian Technologies

ELECTRICAL ENGINEER

ARUP

IRRIGATION

Irrigation Management & Services

MEADOW CONSULTANT

Prairie Restorations, Inc.

BAMBOO CONSULTANT

Susanne Lucas

LANDSCAPE CONTRACTOR

ValleyCrest Landscape
Development

GRAPHICS AND SIGNAGE CONSULTANT

H Plus Inc.