



Green Infrastructure & Stormwater Management CASE STUDY

International Fund for Animal Welfare Headquarters

Location: Yarmouth Port, MA

Client: IFAW

Design Firm(s): Design Lab Architects, Stephen Stimson Associates Landscape Architects

Landscape architect/Project contact: James Royce, ASLA, Senior Associate, LEED AP, GRP

Email: james@stephenstimson.com

ASLA Chapter: Boston



Photo: Peter Vanderwarker

Project Specifications

Project Description: IFAW is a brownfield redevelopment completed in 2006 on Cape Cod, Massachusetts. Set within a Zone II aquifer protection area water and resource management was critical. The design team applied practical sustainability solutions to the site to achieve a gold LEED rating and earned both an AIA Cote and BSLA merit award. On-site soils were amended and placed on site to create a series of bioswales, raingardens, bioinfiltration basins

and wet meadows. The conventional drainage infrastructure was reduced significantly while all stormwater is treated and infiltrated on site, helping to meet permitting and stormwater regulations. The stormwater components are integrated design elements of the 5-acre landscape restoration that achieved 75% open space. They provide wildlife habitat, biodiversity and native plantings.

Project Type:

Corporate headquarters for a non-profit organization
Part of a redevelopment project

Design features: Bioretention facility, rain garden, bioswale, and curb cuts.

This project was designed to meet the following specific requirements or mandates:

State statute, local ordinance, developer/client preference

Impervious area managed: 1 acre to 5 acres

Amount of existing green space/open space conserved or preserved for managing stormwater on site: 1 acre to 5 acres

The regulatory environment and regulator was supportive of the project.

Did the client request that other factors be considered, such as energy savings, usable green space, or property value enhancements? Absolutely. Environmental protection, landscape restoration, wildlife habitat, open space, biodiversity and overall sustainability were all top priorities for the client and design team collectively.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: \$50,000-\$100,000 (Public funding: Donor driven organization, paid for construction)

Was a green vs. grey cost analysis performed? Yes, green technologies and design for both on-site stormwater and wastewater management systems were determined to be cost effective and employed in the final design and construction.

Cost impact of conserving green/open space to the overall costs of the site

design/development project: As a brownfield the site was totally restored but the creation of open space reduced costs in the following ways:

- reduced stormwater infrastructure through use of bioswales and in site infiltration basins
- provided open space on site instead of IFAW having to compensate with open space purchases elsewhere to meet permitting requirements

- on-site soils were used to create landscape/meadow, reducing soil export costs dramatically

Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)? Significantly reduced costs (10% or greater savings). See above for benefits.

Number of jobs created: 25

Job hours devoted to project:

Planning and Design: 2,500

Construction: 5,000

Annual Maintenance: 40

Performance Measures

Stormwater reduction performance analysis:

All stormwater for the 5-acre site is managed and infiltrated on site, meeting or exceeding permitting criteria.

Community & economic benefits that have resulted from the project:

- IFAW sold existing adjacent greenfield parcel to town, deeded to conservation increasing protected open space
- Remediated and restored brownfield site to LEED Gold project
- Increased property values in area
- Reflects values, goals and commitment of IFAW

Project Recognition

BSLA Merit Award for Design; AIA Cote Award

Additional Information

Links to images: <http://www.stephenstimson.com> <http://www.designlabarch.com/>
http://www.ifaw.org/ifaw_united_states/index.php

The IFAW project has been a model of sustainability and received multiple local and national awards. It has been presented at the AIA National Conference (Cote Award), USGBC Greenbuild, BuildBoston, National Stormwater Conference and the National Brownfields conference.