



Green Infrastructure & Stormwater Management CASE STUDY

Revelle Student Housing

Location: San Diego, CA

Client: University of California San Diego

Design Firm(s): Kieran Timberlake Architects, Nasland Associates Civil Engineers

Landscape architect/Project contact: SPURLOCK POIRIER Landscape Architects | Martin Poirier, FASLA

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ASLA Chapter: San Diego

Project Specifications

Project Description: Use of the central open space of a 500-bed dormitory site for stormwater capture, biofiltration, and groundwater recharge. In the coastal desert of San Diego, rainfall is scarce, yet torrential. The historic solution is to capture and contain the water in pipes. The goal for this project was to make the invisible visible by eliminating any site stormwater piping and instead capture and move stormwater on the surface. In this way, students, faculty, and staff would be treated to an artful display of the large volume of water that previously went unseen during storms.

Project Type:

Multifamily residential

Part of a new development

Design features: Bioretention facility, bioswale, green roof, porous pavers.

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

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: 5,000 sq/ft to 1 acre

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? No.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: \$50,000-\$100,000 (Public funding: State)

Was a green vs. grey cost analysis performed? No

Cost impact of conserving green/open space to the overall costs of the site design/development project: With stormwater capture and infiltration as part of the site program and project goals from the beginning, the site improvement costs were effectively the same as an in-ground, piped sewer development.

Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)? Did not influence costs.

Number of jobs created: Unknown

Job hours devoted to project: Not available

Planning and Design: Not available

Construction: Not available

Annual Maintenance: Not available

Performance Measures

Stormwater reduction performance analysis:

100% of 100-year, 24-hour rainfall is accommodated on site. This equates to 27,565 cubic feet of water that is channeled overland in bioswales and allowed to percolate into the ground in a series of planted holding basins and the living roof structure.

Community & economic benefits that have resulted from the project: Benefits are unknown at this time. However, it is critical to the national and global dialogue on the subject that projects such as this are constructed for their research value. The campus administrators were very interested in using the campus for experimentation and research in the areas of alternative stormwater capture, re-use and overall water saving techniques. To that end, it will take time to fully evaluate the benefits.

Additional Information

Links to images: Email for images.