



Green Infrastructure & Stormwater Management CASE STUDY

South Valley Estates Development

Location: Victoria, British Columbia, Canada

Client: Municipality of Saanich in partnership with Homewood Constructors

Design Firm(s): LADR Landscape Architects, SWELL Environmental Consulting,

Landscape architect/Project contact: Bev Windjack, ASLA, Principal

Email: bwindjack@ladrla.ca

ASLA Chapter: None

Project Specifications

Project Description: South Valley Estates is a 19-unit compact housing development of small single family lots and townhouses in which 23% of the land is protected in green space. The landscape design uses site grading to direct surface stormwater and roof run off to rain gardens and grassy swales where it is infiltrated or detained and treated prior to discharging to a man made creek. The properly functioning creek, developed as part of this project, is a 300m restored agricultural ditch including pools, large wood and riparian vegetation.

Project Type:

Multifamily residential

Part of a new development

Design features: Rain garden, bioswale, porous pavers, and creek development.

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

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? Yes, aesthetics was a major concern. Also

accessibility (a trail was included) , usable green space (there are some open lawn areas), and privacy between rear patio/garden areas (handled with planting).

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: \$100,000-\$500,000 (Public funding: None)

Related Information: Cost for creek related work: excavation of channel, installation of rock and root wads, planting the upper and lower riparian areas and water fringe, CAN \$200,000 in 2005. Cost for planting and bed preparation in multi-family housing development including rain gardens and irrigation CAN \$100,000.00 in 2005. Costs for porous paving were extra to these costs.

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: Conserving/preserving greenspace didn't affect the overall cost at all as the same amount of greenspace would have been saved and provided if we had not undertaken on-site stormwater management. In this instance the cost of implementing on-site stormwater management was about the same as using traditional stormwater management methods - savings was made in not piping stormwater and those savings were put towards creek 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: No new jobs

Job hours devoted to project:

Planning and Design: 60

Construction: 100

Annual Maintenance: few on creek & riparian area (self maintaining); residential site has standard weekly strata maintenance

Performance Measures

Stormwater reduction performance analysis:

100% stormwater is directed to the creek. There are no closed stormwater pipes on this project.

Community & economic benefits that have resulted from the project: The creek and associated trail have become part of a region wide greenway; the creek provides habitat for a wide range of birds and beneficial insects - it is hoped it may be fish bearing in the distant

future; property values have remained high for units in the development, despite the recession.

Project Recognition

Silver CARE Award for Environmental Achievement 2006; BCLNA Environmental Achievement Award (2nd Place) 2006

Additional Information

Links to images: On our office web site www.ladrla.ca

<http://www.ladrla.ca/ImagePage/SouthValleyCreek3.html>