



VALUING NATURE



The
University
Of
Sheffield.

Improving Building Performance Through Green Cladding: The Development of *'Functional'* Green Roofs

Veronica L. Love, Ph.D. student
University of Sheffield

A Functional Green Roof Design



Vancouver Convention Centre

- Green roofs → Engineered ecosystems on rooftops to increase urban green space & reintroduce ecosystem services in cities
- Economic, environmental & social benefits include energy savings, runoff/air pollution reduction, habitat provision, aesthetic improvement

Prioritizing research in **functionality**: improving green roof performance with careful plant selection and design



Fairmont Hotel Roof Garden, San Francisco

Valuing Nature: Putting Nature First



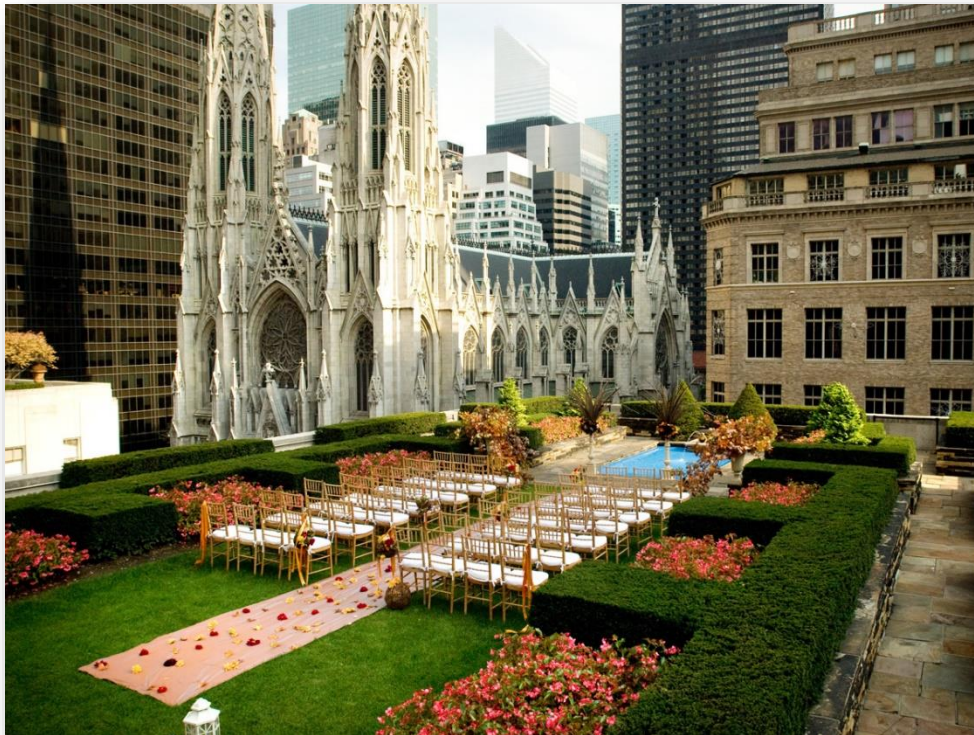
*Life's too short to sell
things you don't believe in.*

– Patrick Dixon (1957–), *Building a Better
Business* (2005)

Research in the Green Roofing Industry

Challenges:

- Inclusion of green roofs in government building policy
- Retrofitting on older buildings
- Construction and maintenance costs
- Vegetation long-term survival



Opportunities:

- Careful plant selection = higher green roof performance
- Higher green roof performance = increased energy savings and other environmental benefits & profit/return in capital investment

620 Loft & Garden, Rockefeller Plaza,
5th Ave, New York City