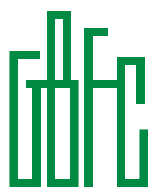


# **Green Building Finance Consortium**

## **2008 Operations Plan**



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**GREEN BUILDING  
FINANCE CONSORTIUM**

## **Introduction**

This document outlines accomplishments of the Green Building Finance Consortium to date and presents the Consortium's operating plan for 2008.

The Consortium will complete the bulk of its written product in six reports delivered in mid-2008 and transition to communication of the underwriting and valuation methodologies to targeted groups through improvements in its web site, speaking, participation in industry collaborations, and related activities.

This report is presented in four sections:

- Background and Mission
- 2008 Operations Plan
- Activities to Date

## **Consortium Background and Mission**

The Green Building Finance Consortium (GBFC) is a working research project founded and led by The Muldavin Company, Inc. GBFC is working on the fundamental infrastructure and process necessary to enable private sector participants to evaluate sustainable properties from a fiduciary/financial perspective.

Given the critical importance of independence, GBFC does not accept membership or financial support from green product or green building trade organizations, and limits the individual investments of any organization in the Consortium's work. GBFC does accept support from a select group of governments, non-governmental organizations, and real estate industry companies actively involved in energy efficiency and sustainability investment.

The Consortium's mission is to enable private investors to underwrite sustainable property investment from a fiduciary/financial perspective. To accomplish this mission, GBFC is developing the underwriting methods and practices required to independently assess sustainable property investment and widely communicating the results of our work.

### **Purpose of Work**

The Consortium goal is to improve sustainable property investment decisions. Our focus is on assisting private sector participants—owner-occupiers, tenants,

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Investor/landlords, spec developers, lenders, appraisers, and tenant rep brokers-to understand how the traditional process of real estate investment decision-making needs to be modified to enable sound financial based decision-making.

The Consortium's work is also intended to clear up the communications between participants in the sustainable property industry and the real estate capital markets, providing a vocabulary and set of analytic frameworks to ease communication. The analytic frameworks should also provide a sound basis for the development of improved data collection and organization to support sustainable decision-making and reduce the improper use of information to either "make" the case for or against sustainable property investment.

The Consortium is led by Executive Director, Scott Muldavin, a recognized leader in the real estate finance and investment industry. His biography is presented in Exhibit 1. Additional information on Scott Muldavin and The Muldavin Company, Inc. can be found at [www.muldavin.com](http://www.muldavin.com).

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### **Complete Written Work Product by Early-Mid 2008**

Our written work involves production of six written reports and development of refined web based resources in three phases as shown in Exhibit 3 and discussed below:

#### **Phase 1: Underwriting Sustainable Property Investment**

In this phase we will produce one major report during the first quarter of 2008. This report will be the primary work product of the Consortium focused on analytic methods and process for underwriting sustainable properties from a financial/fiduciary perspective. This report will present a framework and approach to guide underwriting and valuation of sustainable properties.

#### **Phase 2: Special Reports on Sustainable Underwriting**

In our Second Phase, we will prepare five special reports on sustainable underwriting that go into more depth on some of the most important issues in underwriting sustainable properties:

1. Energy Efficiency Investment
2. Space User Productivity
3. Space User Health
4. Government Regulations and Incentives
5. Enterprise and Business Unit Tenant Demand

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While written reports on other special topics are not planned at this time, as resources permit, we will be upgrading our web based Research Library and Industry Resources on many key topics to improve access to the most important sites and information based on an organizational and searching framework consistent with real estate based underwriting and valuation needs.

### **Phase 3: Special Considerations by Property Type**

Each property type has features/elements and underwriting considerations which are best understood and presented in a property type report. While our written reports discussed above will address property type considerations, we do not plan property specific written reports at this time. However, we will be upgrading our web based Research Library and Industry Resources on many key topics to improve access to the most important sites and information.

### **Improving Sustainable Property Investment Decisions**

With the written product complete, the Consortium will focus on dissemination of its underwriting and valuation methodologies. Key target audiences include corporate real estate executives and facilities managers, investor/landlords, developers, lenders, appraisers, and tenant rep brokers. Secondary targets include governments and other policy-makers working to improve the transformation of the industry through regulation and incentives for private sector participants. A third target group will be other real estate service providers including engineers, architects, builders, consultants and others interested in improving communication with capital providers.

Key activities will include:

1. Management of finance-investment focused internet resources on [www.GreenBuildingFC.com](http://www.GreenBuildingFC.com).
2. Response and assistance to high volume of phone inquiries.
3. Speeches and presentations at conferences, seminars, workshops.
4. Participation and more substantive collaborations with national/international organizations working to improve decision-making/break down investment barriers (Provide financial/valuation perspective often needed in these efforts).
5. Assist various trade-groups and others in preparation of more refined and targeted publications, teaching materials, underwriting guides, etc. for key target audiences—recognizing need for more strategic (shorter publications) and more operational (more detailed documentation) depending on the audience.

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6. Additional work on creative financing, performance contracting, leasing and related solutions to the challenges of existing buildings and split incentives.
7. Participation on advisory boards and other positions that assist in promotion of Consortium objectives.

## **Accomplishments to Date**

### **Organizational Development**

- Built a multi-disciplinary team of Consortium members, Advisory Board members, Implementation Team members and real estate industry trade groups to create and disseminate the Consortium's work product (Exhibit 2);
- Developed a valuable web page with searchable Research Library, targeted industry resource links, and GBFC Research including numerous speeches and publications from GBFC staff and advisors and a GBFC Glossary and Acronym index ([www.GreenBuildingFC.com](http://www.GreenBuildingFC.com));
- Developed a valuable searchable Rolodex contact list with over 1500 contacts in the "green" industry coded by contact type, research category, property type, and over 20 other key categories;
- Created a substantial digital and hard copy library of key documents and related information bearing specifically on the valuation and assessment of sustainable property risk;
- Raised sufficient funding through The Muldavin Company, Inc. and Consortium members to initiate the Consortium's work to achieve its mission.

### **Research**

- Collected and organized thousands of documents related to achieving the mission.
- Evaluated documents and conducted hundreds of interviews to develop the base knowledge necessary to develop the detailed Work Plan necessary to achieve mission (See Exhibit 3).

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- Completed substantial research in most of the 18 project areas identified in the Work Plan shown in Exhibit 3.
- Initiated and managed specific research with approximately 20 Implementation Team Members—a select sample of which are mentioned below:
  - Working with Molly McCabe, prior head of Bank of America's Real Estate Capital Markets, Andy Fuscas, GBFC Managing Director, Roy Schneiderman, Bard Consulting, and Patrick Lord of Arbor Realty Trust on the cost-benefit, underwriting, and sustainable element based evaluation frameworks;
  - Working with Jackson Lehr, Previously of Harvard Business School and now GreenOrder, Mark Mendell, Lawrence Berkeley National Labs, Judith Heerwagon, and Don Horn, GSA, and others on worker health and productivity issues;
  - Working with John D'Andrea, GBFC, EPA ENERGY STAR Division, CB Richard Ellis, Kennedy Real Estate Counsel, CTG Energetics, CalSTRS, Steve Selkowitz (LBNL), and others on energy related issues;
  - Working with Tim Lowe, MAI, Waronzof Associates, Brian Gross, Waronzof Associates, Theddi Chappell, MAI, Chris Corps, Asset Strategics, Peter Korpacz, MAI, and Jim Amarin, Appraisal Institute, and others on valuation issues;
  - Working with Peter Morris, Davis Langdon, David Gottfried, World Build, and many others on assessing the risks in the sustainable development and construction process.

## **Communications**

The Consortium has been actively involved in communicating its preliminary findings and providing an independent financial perspective to a broad spectrum of industry forums and complimentary research efforts.

### **1. Participation in Industry Presentations**

Consortium leaders have spoken at over 50 industry forums and conferences in the U.S., Canada, Mexico, Europe, and India for organizations and events including:

- BOMA International

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- CoreNet Global
- Mortgage Bankers Association
- Urban Land Institute
- Counselors of Real Estate
- International Council of Shopping Centers
- National Association of Industrial and Office Parks
- National Council of Real Estate Investment Fiduciaries
- Commission for Environmental Cooperation
- World Business Council for Sustainable Development
- Vancouver Valuation Accord
- World Green Building Council
- US Green Building Council
- CB Richard Ellis Global Client Roundtable
- MIT School of Architecture and Planning
- Swinerton Green Building Forums
- Gaining Ground
- Los Angeles Business Council
- NAR CommercialSource 2007
- Etc.

## **2. Publications and Interviews**

Consortium leadership has interacted with scores of media representatives and provided interviews and or articles for many publications including:

- Pension Real Estate Quarterly
- CoStar Advisor
- Trader Monthly Magazine
- Environmental Building News
- Urban Land Green Quotient
- Valuation Insights and Perspectives
- European Real Estate Yearbook
- Investment and Pensions Europe (IPE) Real Estate
- Building Design + Construction, Green Building and the Bottom Line

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- Building Operation Management
- American Banker
- Urban Land Magazine
- REALTORS Commercial Alliance Report
- Environmental Design and Construction Magazine
- REALTOR Magazine
- Green Real Estate News
- Fortune Small Business Magazine
- Etc.

### 3. Collaborations with Industry Groups

Our most important communications are our collaborations with industry groups where we are able to insure the input of independent financial perspective into important initiatives underway and leverage our research activities through combining resources with organizations working on projects complimentary to the Consortium's mission. Important collaborations include:

- **Commission for Environmental Cooperation:** Member of Advisory Group assisting NAFTA created group's multi-year research program on sustainable building. Working closely on finance and valuation issues; providing independent policy recommendations for Canada, Mexico, and U.S.
- **World Business Council for Sustainable Development:** We are collaborating with the WBCSD, made up of 180 of the largest corporations in the world, on their finance and valuation initiatives. Joint interview in Zurich of 10 of the largest financial institutions in Europe on their sustainability practices. Participation in forums in India and other discussions.
- **Royal Institute of Chartered Surveyors:** Working with RICS, the worlds largest real estate professional association with over 130,000 members, to modify valuation standards and guidelines documented in the "Redbook" and related documents to reflect sustainable valuation.
- **Appraisal Institute:** Work with Appraisal Institute to get their perspective on our work and begin development of educational information and appraisal guidance for sustainable property investment.

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- **Mortgage Bankers Association:** Working with MBA to get lender perspective and begin planning for the development of information and tools to prepare mortgage lenders for increasing levels of sustainable property lending.
- **Vancouver Valuation Accord:** We participated in the Vancouver Valuation Accord in early 2007, where valuation professional associations and organizations from around the world, and other governments and companies, came together to promote the importance of valuation in assessing sustainability and set out an ambitious agenda to move this goal forward over the next few years. Continue work with and coordination of valuation related activities.
- **Lawrence Berkeley National Laboratories:** Work with group of building energy and health scientists working on Consortium related energy and building health issues and provide finance/investment perspective to their Zero Energy Building, and related initiatives.
- **Rutgers Center for Green Building:** Working together on project to support "Green" commercial appraisals and the relationship between green buildings and value.
- **CoreNet Global Energy Research Project:** Member of Advisory Panel that worked with CoreNet staff and corporate real estate executives to identify key barriers and enablers to investment in energy efficiency and assess the value implications of energy investment. This project is international in scope and involves in-depth case studies, an extensive survey of corporate real estate executives, and other research valuable to the efforts of the Consortium.
- **Database for Sustainable and High Performance Buildings (DASH):** On steering committee of industry group developing the consistent frameworks and databases necessary to measure the performance of sustainable buildings in the future.
- **Responsible Property Investment Project:** Coordinating with group of investors and academics to evaluate the socially responsible investment market and related Responsible Property Investment movement and its implications on capital availability and tenant demand for sustainable properties.
- **US Green Building Council:** Provide finance and investment perspective to various USGBC venues including Annual CEO Forum, GreenBuild, Research Agenda for the Future Summit, and other venues. Collaborate on select research initiatives.

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- **EPA ENERGY STAR Division:** Working with ENERGY STAR to assess potential modifications and enhancements to Portfolio Manager and Target Finder evaluation tools to further enhance consideration of energy efficiency/carbon output in sales, leasing, acquisition and securitization.

## **Conclusion**

I want to thank everyone who has assisted me and the work of the Consortium during the last 24 months. My Consortium Members and Advisory Board gave me the confidence to move forward. My Implementation Team provided insights and expertise to make me look smart, and made substantial pro-bono contributions. My collaboration partners have provided knowledge, information and contacts to further my learning and research. And finally, thanks to the many other organizations and individuals who have supported our work. I look forward to continuing our work going forward.

Sincerely,

**Scott Muldavin, Executive Director**

Exhibit 1  
**Summary Biography**  
**Scott Muldavin, CRE, FRICS**

In 2006, Mr. Muldavin became Executive Director of the Green Building Finance Consortium, a group he founded with the support of leading real estate companies and trade groups to address the private sector's need for valuation and underwriting practices that would enable an assessment of sustainable properties from a "fiduciary" perspective.

Mr. Muldavin serves on the Advisory Board of the NAFTA created Commission for Environmental Cooperation's Green Building Initiative, an Advisory Panel member of CoreNet's Global Energy Research Project, a member of the Responsible Property Investment Project, on the Steering Committee of the High Performance Building Database and Infrastructure Project, and is actively collaborating with Lawrence Berkeley National Laboratory, Brookings Institution, EPA's ENERGY STAR division, the World Business Council for Sustainable Development, and the Appraisal Institute on property sustainability issues.

Scott Muldavin is President of The Muldavin Company, Inc., a consulting firm serving the real estate industry. Prior to founding The Muldavin Company, Inc. in 1999, Mr. Muldavin was a leader of the real estate consulting practice at Deloitte & Touché.

For 25 years, Mr. Muldavin has advised the nation's leading real estate companies including CalPERS, RREEF, Bank of America, UBS, Alaska Permanent Fund, Catellus, Equitable Real Estate, Standard Insurance Company, Merrill Lynch, Standard & Poor's Corporation, and Freddie Mac.

Mr. Muldavin is also a founding principal and served for three years on the investment committee of Guggenheim Real Estate, a \$ 4 billion private real estate investment company managing investments in properties, REITs, and high yield debt. Until the recent acquisition by Charles Schwab, he served as an Advisory Board Member of Global Real Analytics, a registered investment company advising and managing over \$1 billion of private REIT and CMBS funds.

Mr. Muldavin has been involved in the commercial mortgage-backed securities industry since it's beginning in 1984. He was the lead consultant that developed the first commercial mortgage risk-rating system for Standard & Poor's Corporation that initiated the \$600 billion CMBS industry.

As a national leader of the Real Estate Financial Institution's practice for Deloitte & Touché, he worked with financial institutions like Freddie Mac and First Bank

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Systems to improve their underwriting and servicing systems, assess risks in their mortgage portfolios, and estimate loan potential losses.

Mr. Muldavin has been involved in the Real Estate Investment Trust (REIT) market since the early 1980s advising clients including E.F. Hutton, Merrill Lynch, CalPERS and others concerning new REIT securities offerings and investment issues. As an investment committee member of Guggenheim Real Estate, he monitored the REIT market and participated in investment decisions concerning the allocation of hundreds of millions of dollars of REIT investments.

Mr. Muldavin has been involved in the structuring and due diligence of real estate property and business transactions. He has completed due diligence engagements involving the acquisition of office buildings, retail properties, hotels, multi-family properties, industrial properties, large land parcels, mortgage portfolios, mortgage companies, commercial banks, real estate service companies and other real estate assets. As an advisor and Investment Committee member of Guggenheim Real Estate, Mr. Muldavin reviewed hundreds of retail, office, industrial and multi-family investment opportunities throughout the United States, as well as investments in mezzanine loans, B-piece investment, funds, preferred equity, and REITs.

Mr. Muldavin is a frequent speaker and has authored over 200 articles published in *Real Estate Finance*, *Urban Land Magazine*, *Bankers Magazine*, *The Journal of Property Management*, *The Pension Real Estate Quarterly*, *Real Estate Issues*, *The Investment Property and Real Estate Capital Markets Reports*, *Institutional Investor*, *Builder and Developer*, *The Real Estate Accounting and Tax Journal*, and other industry publications.

Mr. Muldavin has been recognized by the American Society of Real Estate Counselors and the Royal Institute of Chartered Surveyors, each of whom have awarded him their highest level of professional certification.

Mr. Muldavin has a bachelor's degree in Environmental Studies from UC Berkeley and a Masters in City and Regional Planning from Harvard University.

Exhibit 2

## GBFC Members and Collaborators

### Consortium Members

- BOMA International
- National Association of Realtors
- Mortgage Bankers Association
- Pension Real Estate Association
- RealFoundations
- Cherokee Investment Partners
- Kennedy Real Estate Counsel
- New Tower Trust
- Principal Real Estate Investors
- Revival Fund Management, LLC
- Swinerton Builders
- Paul Hastings Janofsky & Walker, LLP
- Davis Langdon
- Northwest Energy Efficiency Alliance
- EPA ENERGY STAR Division
- City of Seattle
- William McDonough & Partners (Supporting)
- CB Richard Ellis (Supporting)

### Consortium Advisory Board

- **Brenna Walraven**, RPA, CPM, Chairman BOMA International, Executive Director, National Property Management, USAA Realty
- **Paul McNamara**: PhD, ASIP, OBE, FRSA, Head of Property Research, PRUPIM; Co-Chair of United Nations Sustainable Property Working Group; Chair, Institutional Investors Group on Climate Change (IIGCC)
- **Jim Amorin**, MAI, SRA, Vice President, Appraisal Institute, Atrium Real Estate Services
- **Brent Palmer**, CRE, MAI, FRICS, Senior Vice President and Chief Valuation Officer, New Tower Trust Company

## **GBFC 2008 Operations Plan**

- **Gary Pivo**, PhD, Senior Fellow, University of Arizona; Co-leader, Responsible Property Investment Project
- **Mark Mendell**, PhD, Staff Scientist - Epidemiologist; EETD, Lawrence Berkeley National Laboratory
- **Ron Herbst**, PE, LEED AP, Global Head Energy Management and Sustainability in Global Sourcing and Corporate Real Estate, Deutsche Bank.
- **Karen Cook**, President, EECOM
- **Leanne Tobias**, Principal, Malachite LLC
- **Chris Corps**, MRICS, Principal, Asset Strategics Ltd.
- **Stephan Castellanos**, FAIA, NTD Stichler
- **Peter Korpacz**, MAI, Weiser Realty Advisors LLC

## **Consortium Implementation Team**

### **GBFC Staff**

**Scott Muldavin:** CRE, FRICS, Executive Director, GBFC; President, The Muldavin Company.

**Andy Fusscas:** CRE, Managing Director, GBFC

**John D'Andrea:** PhD, Managing Director, GBFC

**Sue Ragen:** MPP, Director, GBFC

**Jayne Verdon:** Administrative Manager, GBFC

**Graham Steffen:** Research Intern

### **Select Pro-Bono Implementation Team**

**Tim Lowe:** MAI, CRE, Principal, Waronzof Associates, Inc.

**Brian Gross:** Waronzof Associates, Inc.

**Theddi Chappell:** CRE, MAI, FRICS, AAPI, Managing Director, Pacific Security Capital

**Peter Morris:** MCRIS, Davis Langdon

**James Spielman:** Davis Langdon

**Patrick Ramsey:** Partner, Paul Hastings Janofsky & Walker

**Robert Freilich:** Of Counsel, Paul Hastings Janofsky & Walker

## **GBFC 2008 Operations Plan**

**Stuart Brodsky:** EPA, National Program Manager, Commercial Property Markets, ENERGY STAR

**Jackson Lehr:** Harvard Business School, Green Order

**Molly McCabe:** Hayden Tanner, LLC

**Roy Schneiderman,** President, Bard Consulting

## Exhibit 3

# GBFC Work Product Overview

### I. Underwriting Sustainable Property Investment

1. Investment Context
2. Role of Definitions in Sustainable Property Underwriting
3. Fundamental Financial Model for Sustainable Properties
4. Special Considerations in Sustainable Property Underwriting

### II. Special Reports on Sustainable Property Underwriting

1. Energy/Carbon Efficiency
2. Space User Health
3. Space User Productivity
4. Government Reg's & Incentives
5. Tenant Demand: Enterprise-Bus. Unit Value
6. Superior Capital Cost/Access
7. Water Efficiency
8. Sustainable Sites
9. Materials & Resources

### III. Special Considerations in Underwriting by Property Type

1. Office
2. Retail
3. Multi-family
4. Industrial
5. Hospitality