SUITE 650, 2601 FOURTH AVENUE
SEATTLE, WASHINGTON 98121
PHONE 206-623-2935 FAX 206-623-2985

SUITE 100, 1870 THE EXCHANGE
ATLANTA, GEORGIA 30339
PHONE 770-951-7028

HTTP://WWW.GREENFIELDADVISORS.COM

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Economic, Market and Valuation Analysts

Construction Defects — Appraisal Challenges

A Greenfield Advisors White Paper

John A. Kilpatrick, Ph.D., MRICS

February 1, 2011

Over the years, the appraisal profession has recognized the complexity of valuing property with construction defects. Sanders (1996), in a frequently-cited Appraisal Journal article, categorized construction defects along side geotechnical problems as being so complex that market participants rarely understand or appreciate the full ramifications. As such, in our experience, many market participants simply refuse to buy homes with ether existing or remediated construction defects problems. In both the pre– or post-remediation state, this naturally leads to a diminution in property value, often labeled as "stigma" — a term which Greenfield introduced into the appraisal lexicon nearly 20 years ago.

Over the years, Greenfield has been frequently asked to take a leading role in applying valuation methods to these complex problems. We have constantly been at the forefront in the cutting-edge issues, from synthetic stucco (EIFS) in the 1990's to Chinese Drywall today.

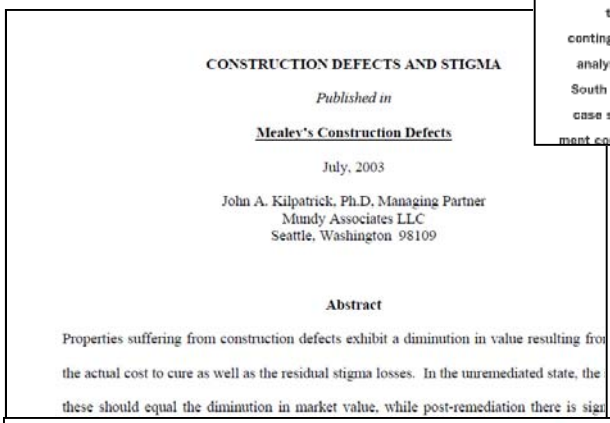

An Exploratory Review of the Effects of Toxic Mold on Real Estate Values

by Robert A. Simons, PhD, and Ron Throupe, PhD

abstract

This article reports outcomes of ten litigated toxic mold cases; a contingent valuation (CV) analysis of toxic mold in South Carolina; and mold case studies of an apart-

Despite widespread recent interest in toxic mold, real estate literature has provided limited guidance on valuation issues for properties affected by it.


CONSTRUCTION DEFECTS AND STIGMA

Published in

Mealey's Construction Defects

July, 2003

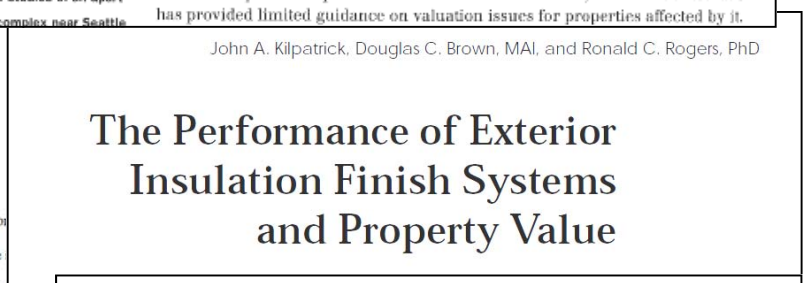
John A. Kilpatrick, Ph.D, Managing Partner
Mundy Associates LLC
Seattle, Washington 98109

Abstract

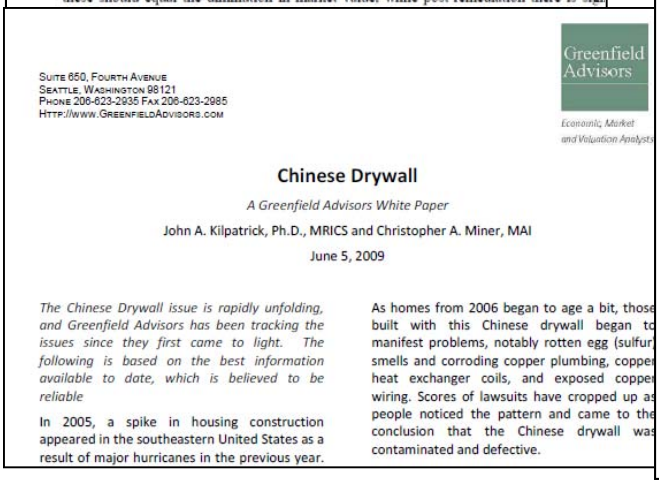
Properties suffering from construction defects exhibit a diminution in value resulting fro

the actual cost to cure as well as the residual stigma losses. In the unremediated state, the

these should equal the diminution in market value, while post-remediation there is sign


John A. Kilpatrick, Douglas C. Brown, MAI, and Ronald C. Rogers, PhD

The Performance of Exterior Insulation Finish Systems and Property Value


SUITE 650, FOURTH AVENUE
SEATTLE, WASHINGTON 98121
PHONE 206-623-2935 FAX 206-623-2985
HTTP://WWW.GREENFIELDADVISORS.COM

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Chinese Drywall

A Greenfield Advisors White Paper

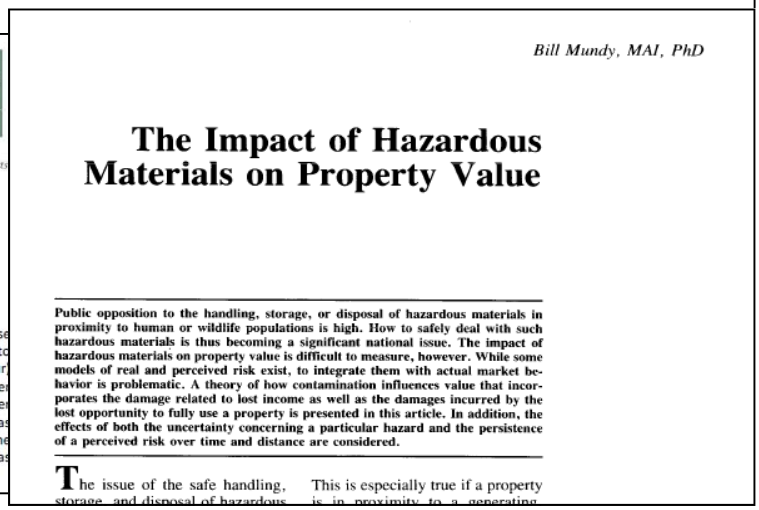
John A. Kilpatrick, Ph.D., MRICS and Christopher A. Miner, MAI

June 5, 2009

The Chinese Drywall issue is rapidly unfolding, and Greenfield Advisors has been tracking the issues since they first came to light. The following is based on the best information available to date, which is believed to be reliable

In 2005, a spike in housing construction appeared in the southeastern United States as a result of major hurricanes in the previous year.

As homes from 2006 began to age a bit, those built with this Chinese drywall began to manifest problems, notably rotten egg (sulfur) smells and corroding copper plumbing, copper heat exchanger coils, and exposed copper wiring. Scores of lawsuits have cropped up as people noticed the pattern and came to the conclusion that the Chinese drywall was contaminated and defective.


Bill Mundy, MAI, PhD

The Impact of Hazardous Materials on Property Value

Public opposition to the handling, storage, or disposal of hazardous materials in proximity to human or wildlife populations is high. How to safely deal with such hazardous materials is thus becoming a significant national issue. The impact of hazardous materials on property value is difficult to measure, however. While some models of real and perceived risk exist, to integrate them with actual market behavior is problematic. A theory of how contamination influences value that incorporates the damage related to lost income as well as the damages incurred by the lost opportunity to fully use a property is presented in this article. In addition, the effects of both the uncertainty concerning a particular hazard and the persistence of a perceived risk over time and distance are considered.

The issue of the safe handling, storage, and disposal of hazardous

This is especially true if a property is in proximity to a generating

The purpose of this paper is threefold:

1. To reflect on the appraisal methodology developed over the past two decades, with particular emphasis on why post-remediation property still suffers from stigma.
2. To illustrate the connectivity between engineering work and market value determinations, focusing on the questions which appraisers need to have answered before the valuation process can begin.
3. To look at current issues, and take a look forward at some issues on the horizon.

Why do you need an appraiser?

It seems simple enough — the remediation costs should be the basis for damages, and that's an architecture or structural engineering thing, right?

However, that logic fails on two accounts. First, there is a common defense argument — which is substantiated in case law in many jurisdictions — that the recovery cannot exceed any reduction in market value suffered by the property. Hence, if they are able to craft a convincing argument that the property has gone up (or at least stayed the same) in value despite the construction defects, then the injured property owner may not be able to recover the cost of remediation.

Of course, this flies directly in the face of real estate realities. Damaged property is generally worth less than comparable, undamaged property, which is a reality that courts generally understand. However, it is not enough to simply provide a checklist of remediation costs and expect the jury to connect the dots between market value and physical injury. The compelling testimony usually needs to be offered by an appraiser who is experienced in these matters.

The linkage between physical damages and market value diminution can be explained in three different ways, consistent with generally accepted approaches to value:

The Cost Approach — The remediation costs of physical damages constitute what appraisers call physical or functional depreciation, depending on the nature of the damage itself. Also, the depreciation may be curable or incurable, and the latter points to one of the explanations of post remediation stigma (see the discussion which follows).

Sales Comparison — This approach is one of the more difficult ones, particularly for appraisers inexperienced in construction defects problems. It generally requires some sort of matched-pairs or hedonic-type analysis of the impact of a construction defect, and then this impact is included as an adjustment in a sales adjustment grid. However, this approach, when properly executed, can provide highly compelling and easily understood evidence.

Income analysis — While generally applicable for income producing property, this set of methodologies gives the greatest insight into the thinking of commercial property investors.

Second, of course, there is the issue of stigma, which can be either pre-remediation or post-remediation. Stigma is real, and it results from a variety of market forces, such as:

- Perceptions of risk
- Incurable aspects of the deterioration
- Market perceptions
- Increased monitoring/bonding costs
- Increased required rate of return (for commercial properties)

The appraisal profession continues to study these problems, and offers up important guidance to attorneys and their clients on the complex valuation issues. In addition to the extensive work by Greenfield, other scholars in the field have contributed important works to the body-of-knowledge. For example, two papers on construction defects were "cover-featured" on the Appraisal Journal (both authored by Greenfield). In 2002, a paper on construction defects won the best valuation paper award at the annual meetings of the American Real Estate Society.

Ironically, most appraisers are unschooled in this complex field, and that lack of training has frequently come back to haunt them. For example, articles in the American Law Review

(1983, 2002) discuss appraisers being held liable for failure to take into account the valuation impacts of construction defects. Malloy (1984), writing in the University of Illinois Law Review, documents appraisers being required to indemnify lenders who lost money in construction defects situations.

Post-Remediation Stigma

Why doesn't stigma simply ameliorate when the construction defects are remediated? Two principal forces are at work. First, the same factors which led to pre-remediation stigma are still very real. Survey research consistently shows that buyers, when offered the chance to purchase either a property which has never been damaged, or one which was damaged but remediated, will prefer the former over the latter. To induce buyers to purchase a damaged-but-remediated property, significant discounts must be incurred. For construction defects linked to health hazards (e.g. — Chinese Drywall, mold, EIFS, water intrusion) these discounts range to 30% - 40% or even higher.

Second, many construction defects cannot be fully remediated in an economically efficient fashion. For example, water intrusion or mold may affect structural members which cannot be replaced, but have a foreshortened structural or economic life as a result of the damage. This incurable physical depreciation constitutes a very real deduction to the appraised value.

What does the appraiser need to know?

One of the most important questions is

Will they get it all?

As trivial as it sounds, this really is at the heart of the valuation problem. In the case of Chinese Drywall, it is apparent that the remediation protocols set out by the Court are rigorous, but may still require ongoing testing and bonding costs to be born by the homeowner or subsequent buyer.

In water intrusion cases, for example, the long-term increase in moisture levels cause a significant foreshortening of the life of wood and metal supports, such as beams, sills, plates, and studs. In Chinese Drywall cases, there is significant market perception that even nails and hurricane straps are compromised by the off-gassing. Since these things cannot be easily removed and replaced (or efficiently substituted), the market demands a discount to compensate for future increases in maintenance, the reduced economic life of the structure, and the simple hassle of dealing with the problem.

Does this market perception affect commercial or income-producing properties?

In short, probably worse. Commercial properties are subject to significantly more due diligence, and property owners are less likely to compromise.

In the current *McGuire Building* case, which is ongoing (coincidentally, in Seattle), something as simple as failure to properly treat the ends of supporting cables will probably lead to the demolition of a 26-story, 9-year-old apartment building. Why? Property owners — and potential subsequent buyers — will do the simple math and recognize that the remaining economic life of the building is simply not worth the expense of increased maintenance, increased risk, and eventual demolition at a date much sooner than typically expected. In *McGuire*, commercial investors had the time and money to invest in significant due-diligence, which took into account the cost-benefits and the long term value of the building.

Is stigma compensable?

While we are Greenfield are not attorneys, and do not pretend to practice law, it is clear — and certainly has been our experience — that Courts understand this issue. Alfert, et. al. (2005), writing in the Florida Bar Journal, document the increasing rational for that. In *Meyer v. Sto*, a widely-cited synthetic stucco case, Greenfield testified to a 30% post-remediation stigma loss to the property owner, with which the jury concurred.

We are aware that the current Chinese Drywall protocols do not call for post-remediation stigma compensation. Despite our extensive work on this issue, we did not testify in the "bell-weather" trial which gave rise to this decision. It is clear,

however, that while post-remediation stigma was testified to, the Court did not find that testimony to be well supported. Lesson learned? This indicates the very real need to craft a well-supported set of documentation supporting property value losses when readying for trial.

Future trends?

While it is always challenging to forecast the future, some trends already seem to be emerging in the valuation field which have significant implications for construction defects situations.

Green Buildings — At Greenfield, we've long been strong proponents of Green construction in all of its forms. Nonetheless, we recognize that many unschooled players are entering the field with much empirical experimentation to be accomplished at the risk of investors.

Two problems seem to be emerging in this arena. First, What if they got it wrong? Second, what implications are there for the non-Green properties. The first question seems patently obvious — investors who purchase interests in a supposedly Green building, at a higher cost than a non-Green building, may be disappointed if expected outcomes do not materialize. What if "certifications" are revoked at some point in the future due to unforeseen circumstances? What implications does all of this have for the value of the building?

The second questions stems from a recent University study into the "benefits" of Green buildings. A large, Chicago firm had their new offices designed to be "Green" including top-of-the-line air filters and other environmentally important features. When University researchers approached the firm to write a case study on the gains from the new offices, they were rebuffed. The firm had been advised by their attorneys that the degree of "improvement" was so great that they were potentially exposed to litigation by clients and employees for "exposure" to the inferior, old spaces.

> *Loss in value caused by structural or geotechnical problems must take into account the cost to repair the damages and the residual loss in value after the repairs—*
>
> *— Sanders, writing in the Appraisal Journal, 1996*

Does this have implications for "non" Green buildings? In other words, does construction of a non-Green space, when "Green" is an option, constitute a construction "defect"? Only the Courts will let us know.

The market melt-down — While rising tides may lift all boats, sinking tides don't act as fairly. In today's tightened credit market, post-remediation buildings will have a more difficult time getting both debt and equity financing. Money will be

Greenfield Advisors was founded in Seattle in 1976 to provide high-level analysis and consulting services on complex real estate problems, with a focus on economic, market, and valuation studies. Over the years, Greenfield has advised attorneys, investors, government agencies, trusts, and university endowments on a variety of real estate problems. Today, Greenfield Advisors is recognized as one of the world's leading appraisal firms for valuation of impaired properties. Greenfield Advisors can be reached at 206-623-2935 or via the internet, www.greenfieldadvisors.com and info@greenfieldadvisors.com.

Dr. John A. Kilpatrick is the President of Greenfield Advisors and a Visiting Scholar in Real Estate at the Zichlin School of Business, Baruch College, in New York City. His Ph.D. is in Real Estate Finance, and he is one of the nation's leading expert witnesses on real estate matters in courts throughout the U.S. Dr. Kilpatrick is the author of four books and a contributing author to three others, including the recently published *Brownfields*, 3rd ed., from the American Bar Association. He is a Fellow of the American Real Estate Society, a Member of the Faculty of Valuation of the British Royal Institution of Chartered Surveyors, a National Appraisal Standards Instructor for the Appraisal Foundation, the Membership Chairman of the Real Estate Counseling Group of America, and serves on the Editorial Board of the Journal of Sustainable Real Estate.

GREENFIELD ADVISORS LLC
SUITE 650, 2601 FOURTH AVENUE
SEATTLE, WASHINGTON 98121
PHONE 206-623-2935 FAX 206-623-2985
HTTP://WWW.GREENFIELDADVISORS.COM

GREENFIELD ADVISORS LLC
SUITE 100, 1870 THE EXCHANGE
ATLANTA, GEORGIA 30330
PHONE 770-951-7028