Joint Center for Housing Studies

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Why Is There So Little Residential Redevelopment
of Brownfields? Framing Issues for Discussion

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Abstract

Redevelopment of environmentally contaminated sites for residential development is a national opportunity because many idled industrial and commercial sites could have significant value if restored to residential use. By converting degraded and abandoned sites into needed housing, residential reuse of brownfields can at once ease housing shortages, redirect growth to areas and sites passed by due to liability concerns and clean up costs, and create more balanced regional growth patterns.

Though a significant opportunity to address a range of policy goals, residential redevelopment of brownfields is not yet viewed as a national priority. As a result, challenges that thwart residential redevelopment remain only partially addressed. Concerns over liability continue, debates over proper cleanup standards and oversight rage, and the funds necessary to restore properties to a suitable condition are in short supply.

Reuse for housing poses additional challenges beyond those present in redeveloping brownfields for other uses, in that there is additional pressure to ensure that remedial actions taken to cleanup the site fully protect future residents. In general, brownfields redevelopment remains hampered by legal and financial problems, as well as the economics of recycling problem sites. In particular, real or perceived unwarranted liability, multiple claimants to cleanup oversight, stringent finality provisions, and the scarcity of funding to cover cleanup costs, as well as for broader community economic development, have all limited public-private cooperation and partnerships for redevelopment. In addition housing reuse of brownfields places further restriction on brownfields development, including special activity and use limitations and stricter cleanup standards involving high-risk populations, particularly children.

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by

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Introduction

Recent development efforts have attempted to capitalize on the stock of the nation's under-utilized properties and former developed lands known as brownfields. Brownfields development in its various forms and approaches is broadly concerned with the recycling of brownfields and the feasibility of returning these idled industrial and commercial lands to productive use. There have been a number of successful cases of redevelopment of brownfields for varying residential use. These include:

Washington's Landing, Pittsburgh, Penn.	42-acre waterfront site in the Allegheny River, in the last phases of construction for a 100-unit townhouse complex.
Belmont Diary, Portland, Or.	2.5-acre site in 1996 included 85 mixed income rental apartments. Phase 2, completed in 1999, featured 30 market value rowhouses.
Lowell Street, Somerville, Mass.	4-acre site due to open in 2000 provides an assisted living facility accommodation for 97 low income seniors.

In addition, federal, state and local governments are engaged in an ongoing effort to improve legislation and regulation to meet the multiple challenges hindering the wider spread redevelopment of brownfields for housing.

State Best Practices

Delaware	Voluntary Cleanup Program 1994 Low-interest loan program-90% cleanup costs Grant, 50% site assessment costs up $25,000
Illinois	Pre-Notice Site Cleanup Program Environmental Remediation Tax Credit Bank Participation Loan Program (Chicago)
Massachusetts	Privatized Voluntary Cleanup Program 1993 Env. Remediation Tax Credit up to 50% Loan/Grant Programs for asessment/cleanup State Insurance Program for cleanup costs, environmental liability & lender protection.
Michigan	Clean Michigan Initiative Site Reclamation/Site Assessment Grants Cleanup and Redevelopment Fund
Pennsylvania	Industrial Sites Reuse Program Land Recycling Program (1995) Job Creation Tax Credit Program

Federal Actions

Brownfields National Partnership Action Agenda

Department of Housing and Urbanization (HUD), Community Development Block Grants

Economic Development Initiative, Housing and EZ/EC Programs.

While many brownfields are located in commercially zoned areas, much remains to be done in the remaining sites. Recent land reuse reporting indicates between 4.6% and 9% of current brownfields development is for residential use, along with the presence of limited residential components in mixed-use developments. The paucity of examples of residential redevelopment of brownfields, especially in light of estimates of the number of brownfields

sites that range as high as 600,000, underscores the importance of addressing the outstanding impediments to large-scale residential redevelopment of these sites. Confounding matters even further, many of the positions concerning key issues currently surrounding brownfields development have become polarized.

Key Issues

- Public Perception

  Municipalities, towns and development agencies argue that disclosure of the presence of brownfield sites alarms community stakeholders, slowing down the planning process, while others support more open discussion with all stakeholders.

- Costs and Time

  Economic development groups and agencies have pressed for streamlining of resources, funding and regulatory overview and finality in the brownfields development process to minimize uncertainty, while those who administer and review brownfields development activities fight to preserve the integrity of landuse and planning processes.

- Social Justice

  State, and local community and civic groups press for equitable distribution and access to brownfield resources and opportunities, while some development agencies want to capitalize on the expediency of brownfield proposals for economic development.

- Risk-based Standards and Environmental Equity

  Some environmental groups have insisted on the highest possible cleanup standards for proposed residential redevelopment under the banner of environmental equity while others have argued that the value of such standards has not been fully demonstrated and impedes economic redevelopment of sites.

- Sustainability/Replicability

  The ability to duplicate development processes nationally, while addressing common issues of economic efficiency and regulatory compatibility, are pursued by private development groups while others have argued for a more locally responsive individual approach to brownfield proposals.

In such context the time is ripe to review and debate the issues that stand in the way of brownfields redevelopment for housing. In an effort to structure that review and debate, this post-conference paper places brownfields challenges and opportunities within a planning framework. The first step in broadening this framework is to recognize that the theory and practice of brownfields redevelopment has evolved in important and progressive ways since coordinated action to address degraded sites began several decades ago. At first, the theoretical focus was on science, and practice was focused on environmental clean up. Beginning in the 1980s, the focus shifted towards the theory of economic development and practice focused on brownfields redevelopment as a part of wider efforts to build-up the economic base of communities.

Recently, the theory of brownfields redevelopment has become situated in integrated planning models that stress wider regional concerns and regional economic competitiveness. Here brownfields development forms part of a larger system of regeneration proposals. This final model is integrative, and holds the promise of being sustainable and replicable.

Phases of Theory and Practice of Brownfields Redevelopment

PHASE	**MODELS**	**PRACTICES**
First	Scientific	Environmental Cleanup
Second	Economic Development	Develop Economic Base
Third	Integrated Planning	Large-scale Regeneration

Practice in this third stage has yet to catch up with theory, but as it does, brownfields redevelopment will form an important capstone to efforts to implement smart growth, create livable communities, and bolster economic competitiveness. As this perspective gains hold, the issues that remain at the core of brownfields redevelopment may be seen in a different light, altering perceptions of what is possible and the public and economic policy purposes that brownfields redevelopment can serve.

Building on the emergence of an integrated regional planning view of brownfields, a framework derived from an existing landscape planning model (The Steinitz Framework 1994) is adapted here for brownfields reuse. The intent of the resulting Brownfields Planning Framework (BPF) is to organize sets of key issues pertinent to brownfields reuse and place them in the context of the planning issues that all integrative plans must inevitably address. The issues unique to brownfields that are placed within the model are risk-based standards, public perception, financial liability, state and local officials, housing redevelopment capacity, social justice and environmental equity, costs and time, access to capital, and sustainability/replicability.

Purpose of Paper

Despite the individual brownfield development success stories, the general under-performance of development on brownfields nationally continues to be a topical and contentious subject. Nationally, estimates as to the number of remaining brownfields sites range from 250,000 to 600,000. (2) Even if the lower number is taken, the amount of residential development as part of mixed-use projects or as individual land uses is scarce. Though brownfields redevelopment in general remains limited, the dearth of residential brownfields development, in particular, suggests barriers beyond current impediments to brownfields redevelopment for other uses. These overarching impediments generally fit into three categories: legal, financial, and general economic development. Within these categories specific impediments include: concerns over unwarranted liability, problems associated with cleanup oversight, finality provisions, the lack of funding for cleanup costs and for economic development in distressed communities, and a scarcity of public-private cooperation and partnerships. In addition housing reuse of brownfields places creates additional problems that include activity and use limitations and potential stricter cleanup standards involving high-risk populations.

In this paper key issues surrounding the question, why has there been so little residential redevelopment of brownfields? are framed for future discussion. The purpose of this post-conference paper is to present and illustrate a general planning framework for these

key issues that will assist in addressing the under-development of brownfields in the context of housing and homebuilding programs. (3)

As a result of the activities of federal and state policy makers and regulators, the ongoing work of owners, developers, lenders, environmental and community planners, brownfields regeneration has reached a critical mass of opportunities and accomplishments. (4) Still, the lack of significant development activity in comparison to the large number of brownfields understood to be present in the nation's cities and small towns strongly suggests that the nation has failed to build on that critical mass. Indeed, the continuing fear of a costly web of never-ending liability, despite tax relief provisions and covenants not to sue (CNTS), continues to scare off public and private developers alike. In addition, it is far easier to redevelop sites with only modest contamination than large quantity of more substantially compromised properties, unfavorably sited for immediate redevelopment, or sites that preclude economic reuse due to their small size. These sites are often found in older manufacturing towns or city districts. For example, in the City of Los Angeles, where the local brownfields program has focused on large industrial lots, the challenge still exists to address smaller sites within existing residential communities involving polluting neighborhood businesses, including service stations and dry cleaners.

Whether brownfields development is considered to be substantial or modest, the use or non-use of these sites has still had a significant impact on urban development patterns. Shifting population and employment concentrations are redistributed in the urban fabric while large rundown and semi-abandoned core areas of the inner city persist.

Interest in brownfield sites by local municipalities, financial institutions and community partnerships intensified after initial obstacles to the magnitude and uncertainty of environmental liability were lifted through a number of voluntary cleanup programs and government incentives. Brownfields legislation and voluntary cleanup programs have evolved in more than 29 states. Common elements of cleanup programs are relief from environmental liability, predictable cleanup standards, protection for lenders, public participation in the review process and protection from third-party lawsuits. Federal initiatives included memoranda of understanding, pilot demonstration pilots, showcase communities, and the development of programs to support innovative technology practices to encourage less expensive and faster site assessment and cleanup.

Despite progress made reducing the uncertainty of environmental liability, much concern remains. In addition, the perceived disjunction between the intent, scope and intensity of brownfield policies and initiatives at federal, state, and local levels has caused developers to shy away from brownfield sites. Protests charging that local needs are not fully accounted for by developers have further cooled private sector interest in redeveloping brownfields. Not only are developers waiting for government to address the problems that they perceive with brownfields redevelopment, they are also hoping that the insurance companies and lenders will develop programs tailored to the special challenges of redeveloping brownfields.

The evolving work of brownfields development is structured around distinct areas of expertise: economic, legal, financial, geo-technical, environmental remediation and enhancement, real estate development, and planning. These set up corresponding activities and strategies that intersect and overlap at key points in the overall development process.

In short, the scope of the subject of brownfields and brownfields development is broad and increasing in complexity and the issues arising from brownfields development continues to span different specialties and levels of jurisdiction. Methods to explain or organize the subject of brownfields development have focused on cataloging federal, state and local policies and initiatives. City agencies (5) and non-profit organizations (6) have in turn produced handbooks and guidelines for lenders, developers and communities that address local brownfields development conditions. These resource guides typically share information on how to handle such issues as hazardous material exposure, cleanup oversight and sign-offs, tax incentives, partnership agreements, funding assistance for cleanup and redevelopment, and outline in part, development and review procedures.

Planning for the redevelopment of brownfields, however, is still concerned, as are other site planning and development endeavors, with the productive use, reuse or conservation of land and natural resources. The application of planning theories and models in brownfields development can assist in situating past and present planning strategies and help chart alternative and additional directions for future federal and local policies and initiatives. This is particularly the case when many of the current issues of brownfields development are polarized and jurisdictional control is overlapping. By placing these issues

in a broader—an integrative—planning framework, they can be viewed in their proper context, i.e. issues that though more difficult to address than some others are normal and inevitable parts of coordinated planning.

Part and parcel to situating brownfields issues in an integrated planning framework is the need to identify the planning purposes that brownfields redevelopment can rightfully serve. There is growing recognition that planning for brownfields, while it must continue to be rooted in scientifically rigorous clean up procedures and must additionally serve local economic development, must also become integrated with broader regional planning efforts aimed at improving regional quality of life and strengthening regional competitiveness. Indeed, brownfields redevelopment is emerging as a cornerstone of smart growth development strategies.

This paper introduces a framework which we call the Brownfields Planning Framework (BPF). It is derived from an existing framework for theory and practice in landscape planning, the Steinitz Framework (Harvard 1994), and considers brownfields redevelopment as part of broader regional, smart-growth initiatives. (7) The Steinitz Framework has been used to successfully organize planning alternatives for planning and growth studies in a range of classes of planning problems and within a broad spectrum of geographical regions, (8) and is adapted here for the subject of brownfields development and reuse.

The development or redevelopment of land has "a common structure in the nature of questions asked by planners and environmental design professionals". (9) The intent of the new Brownfields Planning Framework (BPF) is to organize sets of issues and questions pertinent to brownfields. The issues, derived from earlier discussions held between representatives of invited legal, economic, regulatory, environmental, management and financing agencies and institutions, (10) are structured here within the Brownfields Planning Framework (BPF).

Brownfields Restoration: Three Models

The nature of brownfields restoration activity has quickly evolved over the last six years. Two models initially served as approaches to brownfields restoration, Environmental

Cleanup and Enhancement and Economic Development. A third model, Integrative Planning, has developed in response to the evolution of larger economic and growth challenges.

Model One

The first model derived from the desire to restore contaminated land to its pristine state. This responded to the need for immediate environmental repair of contaminated land and relied on legislation and regulations to direct restorative action. The purpose was to cleanup the brownfield in order to protect public health, safety and welfare, to reduce environmental impact on abutting properties and to create a healthier environment.

Model Two

The second model viewed brownfields as an economic development entity and was derived from a market approach rooted in the restored economic value of the land or property within its context. This included not only an increased local tax base but fueled potential employment opportunities and supporting service activities.

Both of these models recognize problems related to the uncertainty of site-bound pollution to be found on brownfield sites and the nature of the replicability of the process.

Model Three

The evolution of a third model proposes the integration of brownfields development and reuse within regional or metropolitan-scale planning initiatives. Here, brownfields development forms part of a larger system of regeneration proposals that is integrative and replicable.

Of significance to future development is the changing brownfields climate, where a mixture of broader private and public/private development concerns are now replacing site specific regulatory and economic factors as a driving force. These development concerns include the integration of brownfields development within broader land use and alternative planning futures. Among these future options are efforts to increase regional competitiveness by focusing on quality of life issues and productive deployment of land, reduce urban sprawl, create inner-city and inner-suburban infill projects, protect and develop waterfronts, stimulate use of mass transit, and preserve and create recreational open space. This is of particular significance to the residential reuses of brownfields because it creates higher residential

densities in already developed areas, taking pressure off development of greenfields and stimulating mass transit.

Indeed, seen from this broader perspective, the importance of a strong metropolitan regional governance structure or state role in addressing brownfields issues is underscored. Also highlighted is the value of diverting government spending and attention from other uses to brownfields redevelopment. Finally, and perhaps most importantly, the importance of addressing brownfields to unleashing the productive value of land, eliminating the negative externalities associated with idled and contaminated sites, and creating positive externalities associated with quality residential areas, is prefigured.

A Framework Applicable for Brownfields: Introducing the Steinitz Framework

A short introduction to the existing landscape planning framework, the Steinitz Framework (1990; 1994) is given below. A longer description of the framework can be found in the papers identified in the reference notes. (10)

The six questions and corresponding models of the Steinetz Framework are as follows:

Question 1. How should the state of the landscape be described?

This leads to *representation* models.

Question 2. How does the landscape operate?

This leads to *process* models.

Question 3. Is the current landscape functioning well?

This leads to *evaluation* models.

Question 4. How might the landscape be altered?

This leads to *change* models.

Question 5. What predictable differences might the changes cause?

This leads to *impact* models.

Question 6. How should the landscape be changed?

This leads to *decision* models.

To define the context and scope of the underdevelopment of brownfields question, the framework is adapted to organize and structure the issues identified and discussed in the pre-

conference meeting. These issues are: risk-based standards, public perception, financial liability, state and local officials, housing redevelopment capacity, social justice and environmental equity, costs and time, access to capital, and sustainability/replicability.

Using the framework enables each of these issues to be linked with an associated model type: a model that is useful and based on the management of information. In addition, the issues can be understood in relationship to one another and in terms of the overall framework. It should be noted that Question 6 is concerned with the ability to make decisions and the use of decision-based models and is beyond the scope of this paper. In addition, the issues identified in the pre-conference meeting are generally very broad in scope and so could be placed alongside many of the questions depending on individual interpretation and emphasis. For example, issues relating to state and local officials identified at the pre-conference meeting is addressed through Question 2, On how does brownfield development operate? but could be addressed in Question 3, Is current brownfields development functioning well?

The Brownfields Development Framework (BDF):

"Six Questions in Search of an Answer" (11), The Steinitz Framework, is adapted here for brownfields development.

Question 1

How should the state of brownfields development be described?

This question focuses on representation planning models. In other words, how is the planned element best described, defined, and enumerated? These models strike at the heart of issues related to how the public perceives brownfields. From a utilitarian point of view, the best representation/public image of brownfields is one that is most responsive to the need for public support of redevelopment while preserving the factual basis and integrity of the representation system. Brownfields vary by size, type, extent of contamination, and level of cleanup. Other possible criteria by which brownfields are represented include the quantity of brownfield developments in relationship to other development patterns and the total number of sites or total acreage. In addition, they are also represented by the type, amount and extent of environmental contamination, the average costs of remediation per site, and the level of cleanup required for different site end uses. Examples of current models in Maryland and

Pennsylvania include a computerized Geographic Information System (GIS) inventory of all vacant properties established by the City of Baltimore (12) and a centralized brownfields database, the Pittsburgh Regional Industrial Site Evaluation System, (RISES) (13) created by the Urban Redevelopment Authority of Pittsburgh (URA).

The public continues to label sites as brownfields during the planning and development process, whether or not real or perceived contamination exists. At the local level, the need for a common set of objectives, resources and advice to inform public opinion requires continued advancement of partnerships between communities, developers and local government. Local and state governments take the lead role in the coordination of brownfields development. The continued confusion around how best to characterize degraded sites raises the question as to whether current levels of funding and resources are appropriate to inform public perception: will advancing more coordination at the local level ensure participation from all community interests, and is this appropriate?

Question 2

How do brownfield developments operate?

Answering the question of how redevelopment of brownfields sites operates leads to the surfacing of a broader set of issues that relate to process planning models. Process models, as the name suggests, focus on evaluating and structuring the actual tactics deployed to achieve the planning end. These relate especially to the role that federal, state and local officials play in brownfields redevelopment, the capacity of local institutions to develop housing on these sites, and the cost and time associated with successfully recycling these sites for residential reuses. Among the issues that remain unresolved, but that demand clarification and response if brownfields redevelopment is to succeed on a wider scale are:

- How well do stakeholders and authorities involved in brownfield development understand how the process works, and how it is perceived and used by others?
- How much complexity or precision in outlining this procedure is worth how much effort?
- Do processes and systems of brownfield developments vary by place and over time? For example, what are the long term costs of cleanup technologies or in regional or geographical differences?

Thinking “outside the box” of traditional development requires state and local officials, CDC's and others to link brownfields development, and to link housing on brownfields to quality of life concerns including: job creation, transportation, living standards and enhancement of communities and the environment. In addition, thinking beyond conventional development strategies will also require increased partnerships between cities, states and regions. These lead to other questions:

- Can local authorities pursue effective multi-disciplinary approaches to brownfields and what support do they require?
- Will local government activities that support brownfields development such as zoning changes and incentives including partial property tax abatements create a more effective brownfields housing development climate?
- Brownfields development activities are eligible uses for HUD's Community Development Block Grants (CDBG) Program. However, these activities must be incorporated into local government priorities through the communities consolidated plan and annual action plan. Will thinking outside traditional models lead to conflicts between federal and local agencies?
- If states want to expand incentive-based voluntary cleanup programs, must final release from both federal and state liability be offered to local levels once remediation has been completed?
- Environmental challenges such as brownfields have not been a traditional focus of housing corporations and will require different forms of coordination and use of facilitators during the development process. Will funding be required to assist packaging of information, the awareness of available resources and the provision of independent experts to CDCs?

The perceived condition of brownfields adds additional financial outlay to development proposals including housing, through potential extra costs and time associated with the site's initial characterization, assessment and cleanup. This results in a smaller pool of developers, owners, and community organizations who are willing to take on risks involved with the uncertainty of costs over time. In addition, the experience of housing and

brownfields development proposals show that many potential developers and local community development corporations do not have the financial and technical capacity to address and manage the financial and environmental risks of brownfield sites.

The provision of better state and local information on, for example, sources of grants for brownfields development, clarification of permitting procedures and processes can lead to "one-stop" navigation resources through brownfields development. This raises still more important issues:

- Can the processes of brownfield development respond to these and other methods to minimize uncertainty?
- Will it, in particular, introduce a wider group of organizations and communities to development opportunities or to a greater amount of development activity?

Question 3

Are the current brownfield developments functioning well?

Under this question, perhaps all the issues surrounding brownfields can be grouped. But this question is intended to focus on evaluation of how well the outcome of process goals meet broader social, economic, or political goals.

The selection of methods of measurement, whether by cost, user satisfaction, public health, number of housing units built, efficiency of development process, increased partnerships, or creation of jobs leads to evaluation models. Given the need to make decisions, how are value distinctions assigned to these methods of evaluation, whose values are they, and by whom are they assigned, and what ultimately do these values portray? As a result, this question forces planners to consider these broader goals up front.

While a number of goals are important in the context of brownfields development, we focus here on equity. A central and outstanding issue in the brownfields debate revolves around the concepts of social justice and environmental equity.

User satisfaction related to brownfields development is focused on stakeholders including owners, sellers, developers, local elected and appointed officials, as well as community representatives. The community that is served by development includes not only adjoining and identified neighbors and neighborhoods, but also those individuals and groups who are affected by brownfields development or have been excluded from previous

development activities. If a dialogue is to continue between and among stakeholders to assure equitable and effective national environmental policy, greater public-private cooperation and partnerships are required. The brownfields redevelopment movement must ask:

- How does brownfield development fit into a community's vision, resources and needs?
- How is this balanced by the private sector's need for cleanup and incentive programs at federal and state level that work only to target properties with market potential?
- Who should speak for the community in terms of cleanup standards?
- What is the proper balance between cleanup standards and the interests of the broader community and future residents of residential developments on former brownfields in seeing the site redeveloped?

Question 4

How might brownfield development be altered?

This question directly leads to the means by which brownfields development can both increase and prosper. Alterations in the planning of brownfields are based on two types of change; alterations brought about as a result of influences external to brownfields, and those caused by implementable actions within brownfields development, such as plans, investments or regulations introduced by federal, state or local agencies. As brownfields development practice becomes part of larger systems of regeneration proposals the urgent need to carry out implementable actions within brownfields requires early identification of issues and the methods by which they are to be changed. Using planning change models also raises other questions.

- What would occur if no changes were made? How would brownfields development evolve?
- How can an understanding of recent changes, including state or local regulations, provide appropriate planning change models nationwide?

Among the issues that remain of concern are those addressing risk-based standards of cleanup, financial liability and access to capital. Risk-based standards, or tiered standards, as

opposed to the less flexible and more stringent background levels of brownfield cleanup, take into account exposure, not toxicity, on a contaminated site. In risk-based corrective action, the objectives are reducing risks to human health and the environment. These are calculated using standardized data, such as the EPA risk-based concentrations for both industrial and residential conditions, or site specific data that is derived from among other things, the intended use of the site and the anticipated population. Among the issues that remain unresolved and demand to be addressed before any implementable change can take place are:

- Is the residential development of brownfields an appropriate place for tiered standards?
- What are the standards and levels of oversight that should be adopted? In short, how viable is the notion of residential cleanup standards?
- Who has oversight on the process and implementation?
- What is the federal role, if any, or will finality be given over to state standards? and do the states have enough experience of monitoring deeded site restrictions?

Of all the impediments to brownfields development, one of the major obstacles is the lack of financing and access to capital for cleaning up sites. (14) Once sites are cleaned up there are a number of public and private funding sources available to finance the redevelopment of the sites for economic development and community benefits In part, the paucity of cleanup financing reflects uncertain risks associated with brownfields. Critical among these risks that demand clarification before implementable changes can take place are:

- The scope, completeness and acceptance by regulatory agencies of the development's Phase I and II Environmental Assessments, as well as the Remedial Action Plan and its compliance with CERCLA and NCP.
- The owner/developer's environmental compliance history and capacity to manage a cleanup project, and the ability of an approved remediation contractor to complete the cleanup project at the contract price with appropriate contractor insurance policies.

The owner/developer of a brownfields development needs to demonstrate the economic viability of the project, identifying the sources of repayment for the loan and the

socioeconomic and public benefits of the redevelopment project. This raises important questions about how to encourage private investment in brownfields:

- How might changes at all government levels encourage private-sector support to establish incentives to access financing for brownfields use from a combination of private and public sources?
- Would a provision for full deductibility of cleanup costs in all brownfield sectors, and the creation of tax incentives, including clarification of federal tax policy regarding scope and timing of deductible cleanup costs, result in momentous changes to the development of brownfields?

Question 5

What predictable differences might the changes cause?

This question leads to considerations of the impact of changes in the development of brownfields. The transferability of brownfield approaches through EPA Brownfield Demonstration Pilot Projects and the highlighting of success stories through models such as the EPA Brownfield Action Agenda/showcase community initiatives demonstrates the issues and problems of self sustaining models of development. These address the singular environments and context of brownfield developments and focus on strategies that are appropriately highly individual and therefore non-reproducible. A number of issues arise from impact planning models that demonstrate the urgency of discussion and responses from all government agencies:

- How will the changes be measured? In terms of the quantity or financial value of additional brownfield developments that may result from the changes, the number of housing units that will be built, the increase in funds and funding sources available to developers and communities, or the reduction of liability concerns in terms of cleanup?
- Who is it to be measured by: federal, state, local authorities, experts, or formal models and tests?

The impact of brownfields on larger development proposals poses additional challenges for achieving significant redevelopment opportunities. Among these are two questions:

- How do larger residential issues and agendas relate to development on brownfield sites?
- What are the detailed issues to aid sustainability in housing brownfields development?

Question 6

How should brownfields development be changed?

The question of how brownfields development should be changed is outside the scope of the present paper, however all integrative plans involving brownfields use decision planning models. Failure to build on answers to Questions 1 - 5 will hamper the ability to make informed decisions and focus brownfield initiatives and resources.

Reaching The Next Step

Time is running out. Brownfields development has progressively shifted from scientific models and practices in environmental cleanup to integrated planning models. Related brownfields development practices have not evolved with the same velocity, continuing to view brownfield proposals as only opportunities for economic development. Likewise constraints continue to hamper productive reuse of brownfields and further slow down development potential. Slow rates of redevelopment, a continuing environment where challenges to brownfields reuse are only partially answered and priorities passing to integrative planning initiatives leaves brownfields development at a crossroads.

- What are the next steps to be taken?
- Which questions and issues are necessary to address?

The value of the framework and the use of an integrative planning model is in giving structure to redevelopment questions and locating brownfields within the broader pattern of growth and economic competitiveness in the national debate. The value of an integrative planning model to organize residential reuse of brownfields remains untested. Nonetheless, if brownfields are to be considered part of the development cycle within the larger national built environment, then the use of planning models will support informed decision-making.

Within integrative planning proposals, the questions and issues of brownfields become redefined. Immediate steps to address key brownfields issues within the framework will inform future brownfields policy and legislative actions, and this in turn can accelerate and redirect the opportunities for brownfields housing development.

Notes and References

1.

The title, "Why is There So Little Residential Development in Brownfields? Framing Issues for Discussion" is derived from "Why is There Underdevelopment in Brownfields?" a forum for discussion on the issues of brownfields and housing developed by the National Foundation for Environmental Education, Washington, D.C.

2.

General Accounting Office Report, 1997. These figures have not been confirmed. States vary in their definition and the way they count brownfields. For example, the California Treasurers Office has provided recent estimates of 119,000 brownfields in California.

3.

An invited group of leaders of key regulatory, financial, development, environmental institutions and agencies addressed these issues at an executive conference and panel discussions held on September 25, 2000, in Washington, D.C. organized under the auspices of the National Foundation for Environmental Education.

4.

"Brownfields" and "Brownfields Development" as a term and activity has entered the national public consciousness in recent years through reporting in the popular press. No records exist of the increase of usage of the terms or acceptance of the classification of former industrial or commercial properties in this way. However, a review of national and regional newspapers reveals it is still synonymous with the environmental degradation of neglected land and buildings and the public health concerns of adjoining communities. Brownfields has now also become a staple of certain professional sectors: real estate, planning, site engineering and remediation, environmental law, development, site design, and community development and planning.

5.

Examples include: *Windows of Opportunity* and *Brownfield Developers Toolbox* published by the General Information Services (GIS) project of southwest Detroit, Mich.., an outreach of the City of Detroit/Wayne County Roundtable on Sustainable Development, May 1998.

6.

Examples include: *Reclaiming Lost Ground: A Resource Guide for Community Based Brownfields Development in Massachusetts* published by Dudley Street Neighborhood Initiative in Roxbury, Mass., April 1998.

7.

Steinitz, Carl. “A Framework for Theory Applicable to the Education of Landscape Architects (and Other Environmental Design Professionals)” published in *Landscape Journal*, (October, 1990) and also Steinitz Carl. “A framework for theory and practice in landscape planning” published in *Ekistics* 364, January/February 1994, 365 March/April 1994.

8.

The range of geographical regions studied include Western Galilee, Israel, West Lake, Hangzhou, China, Mount Desert Island, Me., Lancaster County, Penn., Camp Pendelton, Calif.

9.

Steinitz, C. p 4, *Ekistics* 364, January/February 1994, 365 March/April 1994.

10.

The framework rejects any universally applicable planning models or methods as inflexible and unlikely to be of use within multiple planning situations and states, and to brownfields communities with local project needs. It is derived therefore from a ‘bottom up’ rather than ‘top-down’ approach towards planning in general and theories in particular. The framework is structured around an understanding of what the questions are with regard to any particular planning problem rather than providing solutions. After working through a structured series of questions, an appropriate methodology is built up. The organization of this process is based on a framework that identifies six types of questions or levels of inquiry and their associated theory-driven model types. These define the context and scope of a planning problem or proposal.

11.

The subtitle, "Six questions in search of an answer" is taken directly from a paragraph heading in “A framework for theory and practice in landscape planning” by Carl Steinitz (see note 7).

12.

The system in place since 1998 at a cost of $40,000 was paid by Empower Baltimore and a grant from the EPA.

13.

The Urban Redevelopment Authority of Pittsburgh (URA) along with University of Pittsburgh and Carnegie Mellon University formed The Brownfield Center that established RISES. This database features a complete inventory using criteria of size, location, ownership and environmental analysis.

14.

"Recycling America's Land: A National Report on Brownfields Redevelopment, Volume II" published by The United States Conference of Mayors (USCM) in April 1999.