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# Stigmatized Sites and Urban Brownfield Redevelopment

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THE OXFORD HANDBOOK OF

LAND  
ECONOMICS

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THE OXFORD HANDBOOK OF

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LAND  
ECONOMICS

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UNIVERSITY OF RICHMOND

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## CHAPTER 24

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# STIGMATIZED SITES AND URBAN BROWNFIELD REDEVELOPMENT

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JOEL B. EISEN

THIS chapter addresses the “stigmatized sites” located in urban areas in the United States and Europe and the “brownfields” redevelopment programs aimed at removing the stigma and promoting remediation and reuse of these sites. Although the European Union has put regulatory frameworks in place (Pahlen 2004), the United States has led the global effort to address brownfields redevelopment (Eisen 1996; Sarni 2009; Davis 2011), and the discussion in this chapter will focus on American models for brownfields remediation and reuse.

Typically, the term “brownfields” has come to refer primarily to abandoned or underused urban sites (Eisen 1996; Paull 2008; Wernstedt et al. 2010; US Environmental Protection Agency 2011*b*), often located in declining cities with industries that have ceased operations (for example, the “Rust Belt” cities in the Northeast and Midwest of the United States) (Robertson 1999; US Environmental Protection Agency 2011*c*). Brownfields can be found throughout the nation, in rural and suburban areas, as well as in cities, but urban sites have attracted the most attention. These sites have often had a number of owners and a long history of industrial or commercial uses (Eisen 2007). Frequently, the former owners are not in possession of the sites (and, often, no longer in existence), and the sites are owned by cities or other public entities (Eisen 1996; Hollander 2009).

A brownfield site may be a small parcel, but many brownfield sites are the larger properties that once were the former “crown jewels” of the cities in which they are located (US Environmental Protection Agency 2005). In many cities in the United States, Europe, and elsewhere, brownfields are among the most visible urban properties, such as rotting hulks of abandoned steel mills or other manufacturing facilities, formerly grand railroad stations no longer carrying passengers and sitting idle, and other neglected properties (Wernstedt et al. 2004). These can be large, prominent sites located in the

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urban core near railroads, highways, other forms of transportation, and the bulk of the city's population (Eisen 1996). They frequently attract attention and interest in redevelopment from a wide range of public and private sector entities that may play roles in their redevelopment, including real estate developers, investors, business enterprises, nonprofit organizations, government representatives, and elected officials (Wernstedt et al. 2004).

What are the optimal use and societal benefits of redevelopment at a brownfield site? Brownfields redevelopment has many potential benefits. Reinvesting in an urban core can be the linchpin of a strategy to thwart sprawl (unchecked growth in suburban and exurban areas) and preserve open space (Paull 2008). In recent years, the idea of sustainability has gained traction as a means for pursuing a more holistic approach to urban redevelopment that may include brownfields remediation and reuse, among other strategies (Eisen 1999). Another challenge that brownfields redevelopment strategies may help address is the urgent need to reduce greenhouse gas (GHG) emissions to address climate change. In the United States, the second largest share of GHG emissions comes from transportation, and a large part of that comes from urban commuters. Redevelopment of brownfield sites, if done properly, could spur a decrease in emissions by reducing the amount of vehicle miles traveled (Wernstedt et al. 2004).

The challenges to redeveloping brownfield sites are as numerous as those present at any urban site. However, brownfield sites are not properly priced for current development, in large part because they carry a stigma reflecting the possible presence of environmental contamination (Davis 2011). The primary attribute and added challenge to development of a brownfield site, as compared to other urban sites, is that it is commonly believed that one or more entities contaminated brownfield sites in the past, making decisions that did not require them to reflect the full social costs of pollution, but that the extent of the contamination and added costs are unknown.

In the mid- to late-1980s, the idea began to take shape that the stigma associated with brownfield sites was not a result of larger societal forces, such as changes in consumer preferences or residential patterns, but was instead a byproduct of governmental laws and programs designed to force the remediation of contaminated sites (such as CERCLA, the "Superfund law," in the United States) (Eisen 1996). There are few reliable estimates of the number of brownfield sites, due to many factors, including the imprecision of data collection and the uncertainty whether any specific site carries the stigma of potential environmental contamination. Unofficial estimates of total brownfield sites in the United States are based on incomplete lists dating to the 1980s, including state inventories and the EPA's CERCLIS database that identified potentially contaminated sites. Based on these figures, it is often stated that there may be from 400,000 to more than a million in the United States alone (National Association of Local Government Professionals and Northeast-Midwest Institute 2004; Wernstedt et al. 2010; Davis 2011). Recent figures are more precise. For example, a 2010 report from the US Conference of Mayors, based on a survey of 150 major cities in 41 American states, identified a total of more than 22,000 sites in these cities alone (US Conference of Mayors 2010).

At brownfield sites, there is a daunting information asymmetry for would-be developers. Many brownfields sites sit abandoned for a decade or more without any environmental investigation, so it is often difficult to discern the extent of contamination or whether they would be subject to the requirements prevailing under environmental cleanup laws (Eisen 1996). Once the potential and uncertain costs of environmental monitoring and other policy costs (e.g., dealing with local land use authorities in the redevelopment process) are factored in, developers' reluctance to become involved with these sites is understandable.

## 1. BROWNFIELDS AND THE BROADER CONTEXT OF URBAN REDEVELOPMENT

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Redevelopment of brownfield sites cannot be considered in a vacuum, but must instead be examined against the broader context of urban redevelopment activities (Robertson 1999). The idea that a city that has fallen into decline and decay can stop or reverse that slide through revitalization efforts is not new to the twenty-first century (Kunstler 1993). Nor is it a new idea that some cities that face deplorable conditions eventually regain their prominence or that others fail to do so and are consigned to the dustbin of history.

The causes of urban decay in the modern era are well chronicled (Bradbury et al. 1982; Duany et al. 2001; Hollander 2009). A city may experience deindustrialization when its dominant manufacturing industry declines due to adverse business conditions, leading to vacancies in commercial and industrial areas, a declining tax base, high unemployment, and other indicia of decline (Hollander 2009). A city's geographic advantage may fade if the advantage conferred no longer works in the city's favor due to technological obsolescence or other factors (as in the case of Buffalo when the railroads carried freight traffic more expeditiously than the Erie Canal) or by construction of a transportation artery that bypasses it. After World War II, public policy at all levels of government encouraged building of housing in the suburbs, and urban residents migrated out as a result, further contributing to declines in economic activity in central core cities (Bradbury et al. 1982; Duany et al. 2001; Hollander 2009).

Continuation of a city's decay may appear inevitable. A center city area may decline as the outer areas grow, no matter what redevelopment activities are undertaken. This, of course, would suggest that it is futile to engage in redevelopment activities. However, the arc of a city's slide is often debatable. There have been substantial efforts made to revitalize inner cities in the United States, and demographic trends suggest that, in some cities, these efforts have had some success because some Americans have moved back into the cities and made them desirable again (Kromer 2010). Although some speak of decline and rebirth as evidence that a city "lifecycle" exists, this theory is neither universally accepted nor reliable as a marker for brownfields redevelopment (Hollander 2009).