

(a) Germany³

The U.S.-German Bilateral Working Group, which has been active for more than 15 years, is responsible for bringing together brownfield practitioners from both countries via numerous conferences, workshops, and other venues with the primary goal of sharing best practices to facilitate brownfields revitalization in both countries. While brownfields are a national topic of concern, the term “brownfield” is not legally defined in Germany. However, the term is used widely in the context of unused or underused land that needs intervention to reintegrate it back into the property market—land that often previously served industrial, military, or trading purposes and for which no new use has been found. Given the extent of urban redevelopment activity in many parts of Germany, the term brownfields also includes abandoned housing areas, railway yards, and even shopping malls and offices.

In many cases, the term brownfield also includes the need to manage contaminated land and contaminated groundwater. In fact, a considerable number of brownfield properties in Germany have considerable pollution problems arising from their previous industrial use. Hence, contamination and the associated problems (costs, duration for remediation, liability, reuse options etc.) are serious obstacles for brown-

field redevelopment to be solved within the regeneration process.

The legal basis for brownfield management is established in Germany's Environmental and Spatial Planning legislation. Implementation, however, is with the federal states, which mostly have delegated land management and remediation responsibilities to regional or municipal administrative bodies. Regarding the environmental component, Germany's Federal Soil Protection Act sets the frame for the assessment and remediation of contaminated soil on brownfield land. The Federal Building Code (Baugesetzbuch, BauGB) provides the basis for project planning and building design requirements and defines the best available tools for urban planning. The Federal Building Code emphasizes in its *General Provision* and in a special section for Urban Redevelopment Measures the preference of brownfield redevelopment prior to new developments on greenfields.

In 2002, Germany's political driver for a sustainable land use strategy formally was established in their National Sustainability Strategy.⁴ One of the seven priority fields of action in this landmark strategy is the reduction of land consumption (that is, consumption of greenfields), and brownfield redevelopment is identified as a major tool to achieve this requirement. In fact, the German strategy sets a numerical goal—reduce the consumption of land to 30 hectares per day by the year 2020 (the baseline rate was 129 hectares per day in the year 2000).

Beyond the regulatory requirements and the drive for sustainable land use, brownfields provide a considerable potential for urban renewal in city centres and suburbs. This urban renewal incorporates the triple bottom line encompassing economic sustainability, environmental stewardship, and social benefits that is embraced around the globe.

After German reunification in 1990, specific brownfield problems emerged in the new German states. High greenfield consumption promoted by tax incentives met the decline of industry and military conversion. According to federal estimates, municipalities in former East Germany on average have more than three times as much derelict land with regeneration potential than their western counterparts.

Germany uses a systematic approach for brownfield redevelopment, “circular land use management.” The idea behind this approach is to ensure new use of land predominantly is replaced by re-

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⁴ See <http://www.umweltbundesamt.de/index-e.htm>.

utilization of existing areas (land rotation through land recycling) to avoid the development of greenfields. This cyclic process encompasses planning, utilization, termination of use, abandonment, and finally reintegration. The reactivation of brownfields as part of this process not only is welcome from an environmental viewpoint but also because it satisfies economic requirements (e.g., by avoiding investment in new infrastructure and optimizing exploitation of existing infrastructure) and social needs (e.g., by contributing to a functional and social inclusion)—the triple bottom line.

Circular flow land-use management embodies a different philosophy of use, which is expressed by the motto “avoid – mobilize – revitalize.” This management approach accepts the development of greenfield sites under specific conditions but primarily and systematically seeks to utilize the potential of all existing sites, including brownfields. Circular flow land-use management also intends to provide an integrated political and governance approach that includes cooperation, investment and support programs, land information, legislation, marketing, organization and management, and planning.

The triggers for brownfields revitalization in Germany are similar to elsewhere around the globe—the availability of money, community demand, a private land development company, etc. However, Germany also has large-scale examples of politically and socially conscious revitalization projects. One such example is the International Building Exhibition Emscher Park⁵ completed in 1999 with the goal of revitalizing an abandoned steel mill into a driver for the ecological, economic, and social renaissance of an entire community by establishing innovative housing schemes, a major tourist attraction, new landscape schemes, and social infrastructure.

In Germany, the keywords are “sustainable development,” which closes the circle to its national strategy on sustainability mentioned above. It aims at reducing land consumption, that is, preserving greenspace. The release of this strategy is a significant driver for a number of initiatives on the community, state, and federal levels to put brownfield redevelopment higher on the political agenda. Every state in Germany now has an initiative for inner-city

development and urban sprawl avoidance. The implementation of this holistic strategy is impressive. For example, the German Ministry for Education and Research,⁶ with support from the Ministry for the Environment⁷ and the Ministry for Transport, Building and Urban Affairs,⁸ has kicked-off a special research program called Research for the Reduction of Land Consumption and for Sustainable Land Management (REFINA).⁹ This multimillion Euro program is focused on the following issues:

- analyses and evaluation methodology for sustainable land management and brownfield redevelopment,
- development of new information and communication structures, and
- model concepts for innovative land management in selected regions with different development conditions.

In Germany, there is a significant focus on developing tools to facilitate learning, research, revitalization, and sharing best practices. A recent example is a tool to scan the most important information to kick off a project—termed a “Start Up Plan.” The plan was developed in a project funded by the Ministry for Education and Research as part of the cooperation between Germany and EPA. The idea behind it is to provide a holistic project and business plan tailored to a specific vacant space and stakeholder perspectives. The Start Up Plan focuses on data relating to acquisition of funding, communication, information, and project planning, which are of primary importance to the target groups concerned. The Start Up Plan for brownfields collates site-specific information for stakeholders that previously only was available separately from a wide variety of sources. Thus, the plan facilitates crucial information flow and helps stimulate interest in brownfields and overcome existing prejudices. This tool does not replace general construction and remediation planning required by law or the wide array of other successful informal planning measures. Rather, it complements the existing tools and enhances communication of key information to key decisionmakers.

⁶ See <http://www.bmbf.de/en/index.php>.

⁷ See <http://www.bmu.de/english/aktuell/4152.php>.

⁸ See <http://www.bmvbs.de/en>.

⁹ See <http://www.refina-info.de/en/>.

⁵ See <http://www.landschaftspark.de/en/home/index.php>.

[§231.1951(a)]