



Land of REDEVELOPMENT

How the reuse of brownfields impacts the construction and demolition recycling industry.

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Many decades, even centuries, of industrial land uses, dry cleaners, gas stations, auto salvage yards and more have left environmentally impacted real estate in their wake.

These sites often have left derelict buildings containing asbestos, lead-based paint and other regulated building materials. Many have soil and groundwater impacts from previous land uses that pose a threat to human health and the environment. Environmentally impacted properties even can affect neighboring clean sites through contaminant migration.

What complicates matters is that many of these sites don't have viable owners or deep enough pockets to return the real estate to anything close to the pristine condition that it started in.

Enter the brownfields industry. Where environmentally

challenged real estate falls in the path of urban infill and growth, there lies the opportunity to recycle land. The desire for new land use on an attractive real estate parcel becomes the catalyst for remediation. The Environmental Protection Agency (EPA) and states regulate the industry, local government manages land use and private developers and investors are often the end game.

The brownfields redevelopment business intersects with the construction and demolition (C&D) recycling industry in several direct and less obvious areas.

The EPA is the big driver here. It promotes sustainable materials management, updated deconstruction approaches and environmental redevelopment strategies. The EPA also provides significant funding for brownfields redevelopment.

These approaches reduce landfill pressures and drive C&D recycling in many ways.

SUSTAINABLE MATERIALS MANAGEMENT APPROACH

The EPA promotes identifying C&D materials as commodities for reuse in new construction projects rather than as waste. Sustainable materials management (SMM) is a systematic approach to using and reusing materials more productively over their life cycles. It represents a change in how our society thinks about the use of natural resources and environmental protection. By examining materials use, an SMM approach seeks to:

- use materials most productively with an emphasis on using less;
- reduce toxic chemicals and environmental impacts throughout the material life cycle; and
- assure we have sufficient resources to meet today's needs and those of the future.

How our society uses materials is fundamental to our economic and environmental future. Global competition for finite resources will intensify as the world population and economies grow. A number of key SMM practices can be applied to the brownfields industry:

- **Deconstruction in favor of demolition** – Instead of traditional demolition, the EPA promotes carefully dismantling structures to salvage materials for reuse and recycling, which reduces waste and creates local jobs.
 - **Material reuse and recycling** – Encouraging on-site crushing of concrete for fill or the salvaging of structural steel minimizes the need for new materials and reduces disposal costs.
 - **Green remediation** – Implementing techniques during clean-up that reduce the environmental footprint, such as using renewable energy and materials with recycled content and minimizing water use.
- More productive and less

impactful use of materials helps our society remain economically competitive, contributes to our prosperity and protects the environment in a resource-constrained future.

ENCOURAGING DECONSTRUCTION

The EPA's Deconstruction Rapid Assessment Tool helps stakeholders prioritize deconstruction over demolition to maximize material salvage. The tool enables organizations to triage building stock slated for demolition by assembling data to help prioritize structures for deconstruction and salvage.

The assessment process identifies candidates for deconstruction by examining information on the building's condition and the inventory of salvageable materials. It considers factors that could affect the building's value, such as age, structural integrity, valuable materials, architectural features, as well as environmental hazards.

The tool includes site observations and hazards, damage and deterioration, materials inventory, special consideration for architectural features and guidance for selecting the best response.

Whether a brownfields redevelopment project scope is a few structures in a neighborhood or an entire city's blight program, a rapid assessment can help managers make decisions on allocating time and resources.

STRATEGIES FOR GREEN REDEVELOPMENT

The EPA's "Climate Smart Brownfields Manual" addresses brownfields redevelopment through the lens of climate change, encouraging green redevelopment.

Deconstruction can be a more targeted and environmentally sustainable method of demolition than typically occurs following a



brownfields assessment. Reuse and recycling of building materials can save landfill space, reduce methane emissions from landfills and reduce demand on materials production and transportation, thereby reducing carbon and greenhouse gas (GHG) emissions.

Remediating brownfields sites can generate waste, emit GHGs and require a considerable amount of energy and other resources. Green remediation is the application of more sustainable cleanup practices that lessen the overall environmental impact of the cleanup phase of brownfields revitalization while ensuring it remains protective.

BROWNFIELDS FUNDING

The EPA Brownfields Program provides essential grants and technical assistance to help communities assess, safely clean up and sustainably reuse contaminated properties.

As of fiscal year 2025, the program offers several competitive grant types, including Assessment Grants (up to \$1 million) for site inventories and planning, Cleanup Grants (up to \$4 million) for direct remediation of owned sites and Multipurpose Grants (up to \$1 million) that combine both assessment and cleanup activities. Additionally, Revolving Loan Fund, or RLF, Grants allow eligible entities to provide low-interest loans for cleanups.

Furthermore, the Environmental Workforce Development and Job Training Grants focus on recruiting and training residents for careers

in the environmental field. These funding initiatives are designed to transform blighted areas into community assets like parks, affordable housing and commercial spaces, effectively leveraging significant private and public investment while protecting public health.

LANDFILL REDEVELOPMENT

Redeveloping landfills has become more common in the past couple of decades. What were once society's dumping grounds can become anything from commercial and economic development-driven structures to housing, parks and open spaces. Consolidation of refuse in a redevelopment scenario or complete removal of waste from smaller dump sites creates the opportunity to implement all the strategies discussed above.

Land recycling, or brownfields redevelopment, benefits communities in many ways. It cleans up the planet, reduces urban sprawl, helps fight climate change, spurs economic development, meets community needs and creates jobs. It's also a significant positive force for the C&D recycling industry. **C&DR**

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