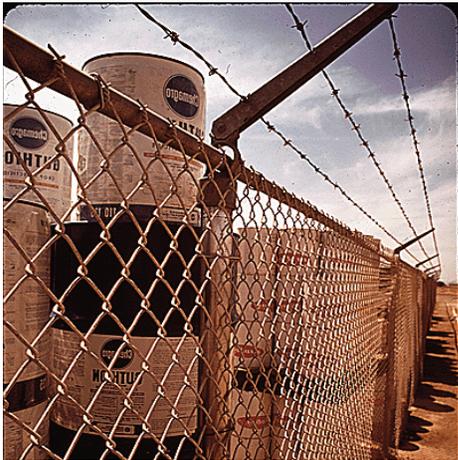


Restoring Neglected Assets: Brownfields Reuse and Related Risks for Landscape Architects



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The cover photo of the chemical drums behind the fence is provided courtesy of the Environmental Protection Agency, www.epa.gov.

Design professionals face many constraints when approaching a project. These constraints are derived from the client (needs, wants, budget) and the characteristics of a given site (size, location). One of the most challenging constraints is the presence of toxic or hazardous substances on a site. Referred to as a “brownfield,” such a property poses serious liability risks to project owners, managers, and contractors under federal and state laws. Though most design professionals typically face less exposure than these other stakeholders, landscape architects should be aware of a number of peculiar circumstances that are specific to this type of project, circumstances that may present more serious risks than landscape architects may be accustomed to or willing to accept. However, brownfield sites may still present attractive opportunities to qualified professionals. In recent years, as sustainable development practices have gained more attention, many involved in real estate, planning, and design have recognized the environmental and economic benefits associated with developing new facilities on sites that have already been “used,” are already served by utilities, and are located near existing population and jobs centers, along waterways, or major transportation corridors.

Background: Brownfield Liability

The increasingly apparent dangers posed to public health by pollution and toxins associated with abandoned industrial facilities and hazardous waste sites prompted Congress to pass the [Comprehensive Environmental Response, Compensation, and Liability Act](#) (CERCLA—often referred to as Superfund) in 1980. This law authorizes the U.S. Environmental Protection Agency (EPA) to assess and clean up contaminated sites, and establishes a clear and comprehensive allocation of liability for entities involved with brownfields. CERCLA defines a brownfield as, “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.” Concerns that CERCLA’s stringent liability scheme, discussed below, was preventing many property owners or managers from redeveloping brownfields led Congress to pass the [Small Business Liability Relief and Brownfields Revitalization Act of 2002](#) (Brownfields Amendments). While other legislation, including the [Resource Conservation and Recovery Act](#) and the [Oil Pollution Act](#), also deal with reuse of contaminated sites, CERCLA and the Brownfields Amendments are the most relevant to the design professional’s exposure.

The EPA publication, [Revitalization Handbook: Revitalizing Contaminated Sites—Addressing Liability Concerns](#) (Office of Site Remediation Enforcement. EPA Pub. No. 330-K-08-002; May 2008), describes several categories of parties that may be held liable for the costs or performance of a brownfield cleanup under CERCLA, including:

- An owner or operator of a facility;
- An owner or operator at the time of disposal;
- A person who arranged for the disposal or treatment of hazardous substances (“generator”); and
- A person who accepted hazardous substances for transport and selected the site to which the substances were transported (“transporter”).

Under CERCLA's comprehensive liability scheme, the liability for any of these parties is:

- **Strict**—A party is liable if it falls within one of the above categories, even if it did not act negligently or in bad faith.
- **Joint and several**—If two or more parties are responsible for contamination at a site, any one or more of the parties may be held liable for the entire cost of the cleanup, regardless of their share of the waste contributed, unless a party can show that the injury or harm at the site is divisible.
- **Retroactive**—A party may be held liable even if the hazardous substance disposal occurred before CERCLA was enacted in 1980.

Prior to the enactment of CERCLA, a number of serious and well-publicized cases of communities sickened or killed by hazardous wastes dumped nearby—such as **Love Canal**—attracted national media attention. The law was a clear response by the federal government to a public health threat, and gave the EPA both the authority to proactively control hazardous substances and the “teeth” to determine liability and force responsible parties to perform and pay for clean up *and* to face criminal prosecution if necessary. It is not difficult to understand why many property owners, developers, and lenders were initially reluctant to become involved in such high-risk projects.

However, over time the EPA provided guidance and clarification of its policies, such that enforcement of CERCLA would be consistent with a major purpose of the law—to encourage the cleaning and reuse of contaminated sites. According to the EPA's *Revitalization Handbook*, “the vast majority of brownfield properties will never require EPA's attention under CERCLA, RCRA, or any other federal law.” There are several ways that certain parties can be involved with brownfields, but not be held liable for clean up. Local or state government entities that acquire a property involuntarily (through eminent domain or tax seizure) are not considered property owners, and as such are not liable for existing contamination. Lenders that hold a mortgage on a property are not liable so long as they do not participate in management or decision making in the operations of the site. If a lender forecloses on a brownfield property, they must sell, re-lease, or otherwise liquidate the property to avoid being considered a liable property owner.

There are circumstances under which a property owner is also exempt from liability, including when contamination is a result of an act of God or act of war. A property owner may also be afforded protection under the Brownfields Amendments if it meets specific criteria enabling it to fall into one of several categories: bona fide prospective purchasers (BFPPs); contiguous property owners (CPOs); or innocent land owners (ILOs). *Appendix A* of this document provides a more detailed description of how a property owner can qualify for one of these protections.

Professionals involved with contaminated site should also note that the “brownfield” definition is broad. As more laboratory research and field testing techniques are developed, the EPA is adding new chemicals to its list of hazardous substances (frequently called “emerging contaminants”), and reviewing the minimum concentrations at which other substances are considered toxic or dangerous. In other words, an abandoned site with relatively low levels of certain contaminants might not be considered a brownfield today, but could be next year after new research prompts the EPA to change its regulation of those chemicals and other emerging contaminants.

The federal government does not have sole regulatory authority over brownfields. Most states have their own voluntary clean-up programs, with similar but different requirements for participating parties. Several states have also begun their own research and regulation of hazardous substances. For example, the *State of California’s Environmental Protection Agency (CalEPA)* has revisited U.S. EPA regulations on what qualifies as “toxic” levels of common industrial contaminants such as naphthalene and benzene in soil and groundwater. CalEPA, based on its research, has established lower thresholds for these same chemicals if they are vaporized and can be inhaled by occupants of a site. This is of particular concern for parties trying to develop office or residential units on a California brownfield. The *Massachusetts Department of Environmental Protection* has also been funding its own research on emerging contaminants, and in 2006 controversially added the chemical group perchlorate to the state’s list of contaminants, at a concentration well below what has previously been considered “safe.”

Implications for Landscape Architects

It is unlikely for a landscape architect to take an equity or ownership position in a project, or be engaged in construction processes or physically moving materials and soils. As such, landscape architects (like most design professionals providing traditional design services) face far less exposure related to brownfields than do property owners, construction contractors, and design-build firms. However, landscape architects are by no means immune to liability. In addition to property owners, contractors, and transporters, CERCLA describes a potentially responsible party as anyone:

who by contract, agreement, or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by such person, by any other party or entity, at any facility... [Title 42 USC Sec. 103.I §9607(a)(3)]

This provision could include a landscape architect who agrees by contract, or makes representations to the project owner, that part of the services to be rendered will be to use plantings or landscape filtration mechanisms to treat or remediate contaminated soils or water on the site. One of the basic design tools of a landscape architect is “manipulating landform” or “cut and fill,” in short, specifying the movement of soil, sand, and gravel from one location to another. The design and construction documents generated by a landscape architect should be carefully crafted to prevent unwarranted movement or removal of contaminated soils offsite or to other portions of the site where they may pose a greater threat to people.

This risk to landscape architects is not transferable by contract. CERCLA specifically prohibits a project owner or any other party from indemnifying or holding harmless another potentially liable party. [Title 42 USC Sec. 103.I §9607(e)] It is worth noting that if a landscape architect is “rendering care or advice” under the auspices of the National Contingency Plan (commonly known as the EPA’s Superfund program), or is following direction from an onsite Superfund cleanup coordinator, then the landscape architect is only liable for its own *negligence*— which is covered by professional liability insurance policies—and not held to the *strict liability* standard that it would be otherwise. [Title 42 USC Sec. 103.I §9607(d)(1)]

Circumstances Affecting the Exposure of Landscape Architects

Development on a brownfield site only adds layers to the already complex design and construction process. Design professionals must consider many factors and respond to varying existing or potential conditions (including site contamination) during the course of a project, and they employ numerous tools and strategies in their work. The following examples illustrate just a few of the ways in which the risk exposure of a landscape architect working on a brownfield site differs from the exposure presented by “typical” site conditions. This is by no means an exhaustive list.

Storm Water Management

Any manipulation of the physical landscape, from planting trees to grading a parking lot or erecting a building, affects the ways in which rain water collects and runs off of the site. As municipalities and states struggle to combat pollution of waterways caused by urban runoff, and as property owners tire of unattractive,

“overly-engineered” storm water infrastructure, landscape architects are increasingly being called upon to design creative systems for handling rain water, often storing and “treating” it in some way on the site. This poses enough of a challenge with runoff from a “typical” site, but brownfields are especially difficult. The [Pennsylvania Department of Environmental Protection \(PADEP\)](#), for example, urges landscape architects and engineers in its *Stormwater Best Management Practices Manual* to eschew standard approaches in many instances when dealing with brownfields. PADEP proposes various technologies and strategies intended to prevent water from infiltrating into the most polluted parts of the site, and ensure that contaminants do not migrate to adjacent sites (which is more likely to happen if they are dissolved in water). These range from specialized erosion control structures, to plantings that help dissipate certain pollutants, to scheduling various phases of site construction in order to prevent erosion of contaminated soils. It is certainly not common—and may not be insured—for landscape architects to direct construction sequencing, but when working on a brownfield site, this is one of many measures that should be given careful consideration.

Green or Sustainable Development Goals

The rapidly growing popularity of high-performance building standards, including the [U.S. Green Building Council's Leadership in Energy and Environmental Design \(LEED\)](#) program, creates certain types of risk for design professionals. Landscape architects should be very careful about making express warranties or guarantees of meeting green building goals—including LEED certification—or promising that certain design tools will completely remove contamination from a brownfield site. There are simply too many variables beyond the landscape architect's control to be certain of a specific, quantifiable environmental outcome. Such warranties are not insurable, so the firm would have to cover all of the costs associated with any claims out of its own funds. Similarly, design professionals should not unduly represent themselves as “experts” in brownfield remediation through marketing materials or client contact. It is perfectly reasonable to cite the firm's design experience related to brownfields and to provide satisfied clients as references. However, no design can be perfect, and a client with unreasonable or too-lofty expectations is likely to be disappointed by the results, and may bring a claim against the design firm if the client's project expectations are unmet.

Landscape architects and other design professionals should also exercise their professional expertise and judgment when goals and realities are in conflict with one another. For example, programs like LEED encourage the reuse of brownfields for many reasons, including the theory that sites already served by utilities represent a savings of energy, money, and materials over extending the necessary

infrastructure to an undeveloped site far from an urban area. However, in practice, utility lines and especially systems like storm and sanitary sewers in older industrial cities are often obsolete, poorly-maintained, and decrepit. For example, a landscape architect might create a design that infiltrates storm water onsite, preventing contaminants from running off into city storm sewers and local streams. In theory, that water is in the ground, and poses no threat to a site's occupant. But if an aging city sanitary sewer line on the site is leaking, contaminants may yet wind up in the local water body. At a minimum, if a landscape architect elects to join a design team for a brownfields project, he or she should insist that the client hire an engineer or other consultant to assess the suitability of the site's infrastructure. This should be arranged in addition to consultants studying pollution levels in soils and groundwater, geotechnical attributes, surveying work, and other critical assessments.

Changing Land Uses

It is generally easier to reuse a brownfield site for another industrial use or for many other commercial uses, such as a “big box” retail center, where the polluted soils can be “capped” by a large asphalt parking lot. Designing for office, residential, educational, or recreational uses on a brownfield can be much more challenging. It is important that the client know what land use it is hiring the design team to work towards, and that this use be consistent with the findings of environmental assessments and the contract documents. As mentioned above, CalEPA has established more stringent standards than the U.S. EPA for certain chemicals if found in the air, rather than soil or ground water. Chemicals present under asphalt are unlikely to be vaporized, and in a wide-open park space are likely to be diluted in the atmosphere. Vapor intrusion into residential units, however, can pose serious risks to the occupants as well as the client, design team, and contractor. Landscape architects engaging in brownfields projects should be familiar with the applicable laws of the state in which the project is located.

There is also, of course, variability among brownfields themselves. An automotive manufacturing facility poses different hazards than an abandoned mine, which differs in turn from a municipal waste facility. In fact, many landfills, if properly operated and covered, may not pose any health threat to future occupants. This is often true when the landfill is reused for parkland. Capping a landfill with a parking lot and a warehouse-style retail outlet may seem like a suitable use, but recent cases have demonstrated liabilities here, as well. As matter in the landfill decomposes, the ground under parking lots and building foundations may settle—quickly and with great variation across the site. This can wreak havoc on building foundations, structural systems, drainage patterns, and buried utilities. Several states and professional organizations have begun

encouraging the use of some highly technical solutions to these problems, but landscape architects should be familiar with these risks before signing onto a project and be comfortable that both the in-house staff and the other members of the design team are equipped to address such issues.

Market and Client-Related Risk

All real estate development projects are inherently risky, so it should be no surprise that development of a site saddled with potentially unpredictable levels of pollution presents greater risks to all parties involved. Lenders, contractors, and other parties are often wary of taking on such projects unless their compensation for doing so is greater than for a normal site. This is not easy to accomplish for a developer if the cost of cleaning a contaminated site is greater than the present-day value of the property. This is especially true during a struggling economy where construction projects are slow to start. However, present economic conditions have not precluded the redevelopment of brownfield sites. While many large projects have been shelved for the time being, a number of smaller projects have continued.

Common characteristics of brownfields—that they are often located in close proximity to existing residential and employment centers and are already served by utilities and infrastructure—are some of the same traits that make any site more attractive during a recession. In the same vein, while pollution remediation work typically causes redevelopment of a brownfield to take several years longer than a similar project on uncontaminated land, that timeframe is less of a hindrance when there is little pressure to get a property “on the market” to take advantage of rising prices. Some of these smaller projects have also been aided by a recently expanded availability of cleanup grants administered by the EPA and funded through the [2009 American Recovery and Reinvestment Act](#).

Design professionals should keep all of these factors in mind when approaching a brownfield project. The sophistication and financial strength of the client should be carefully considered. A naïve or unsophisticated client is much more likely to have unrealistic expectations and lose patience during a long, complex brownfield project, which can easily lead to disputes. While any development project requires the marshalling of significant financial and organizational resources, design professionals should remember that longer-term, more expensive projects (like brownfields), especially during a recession, are more likely to strain a client’s resources to the limit. A landscape architect should be reasonably comfortable that a client has the wherewithal to continue paying its consultants and contractors throughout the life of the project, and should use contractual provisions and consistent collections procedures to provide some recourse in case of termination before the project is complete. The landscape architect should also be reasonably comfortable that the subcontractors and other

consultants on the project have sufficient skill, experience, and resources to perform adequately. This is often difficult to ascertain, but riskier projects have the potential to attract less cautious contractors. This is particularly true during a weak economy, when firms that would normally shy away from such a project suddenly proclaim themselves to be “experts” on brownfields in order to increase their workflow.

Certifications

Clients, lenders, government agencies, and certain third parties may request certifications from the design professional that given portions or aspects of the project have been completed or performed within the scope of the contract documents. This is typically a role performed by an architect or other “prime” design professional, and is a risk associated with all projects. It is worth bearing in mind that the likelihood of such requests increases with brownfield redevelopments, when all parties know there are hazardous substances present. Since there are also likely to be more technical consultants and subcontractors involved with a brownfield project than others, the risks of carelessly “rubber stamping” all requests is higher. Contract language should appropriately define the role and limit the liability of the design professional in relation to these responsibilities.

Future Conditions

Not all contaminants can be “cleaned” or removed from a brownfield, and as long as such substances exist, there is the potential for them to be carried off of the site or into peoples' homes and businesses. This is an inescapable risk. The future conditions of the site may not be known. It is not entirely predictable, for example, if a “capped” brownfield is later abandoned, with fissures developing in its aging asphalt, whether the buried contaminants can leach out into other sites and the groundwater supply. The courts may well determine this to be a maintenance responsibility of the property owner or manager, but if hazardous materials are released, even a design professional may be liable under CERCLA's strict, joint, and several liability scheme.

This may even be true in other, less likely scenarios, which could involve climate change and an associated rise in the sea level. Of course, no case has yet arisen where a redeveloped brownfield later shed its contaminants across the local harbor because the average sea level rose, causing the site to be inundated. If such a situation occurred thirty years after a project is completed, it would be difficult to say that a design professional was negligent. But under a strict liability scheme, he does not have to be. Since CERCLA's liability is joint and several, the design firm might find itself the target of a federal effort to recover its now-massive cleanup costs decades hence, after the developer of the project is

deceased and the engineering firm has folded. CERCLA's statute of limitations supersedes state and local regulations, and runs for three years after the *discovery* of the *release* of hazardous substances that affects an innocent party or the public. It has nothing to do with the date that the project is completed, or with any applicable statute of repose.

Landscape Architects and Brownfields: A Summary

A brownfield site can offer a landscape architect the opportunity to use professional skill and expertise to transform a blighted area into a valuable and appreciated community asset. But the transformation process also carries risks that no prudent landscape architect can overlook. While property owners, contractors, and waste/debris haulers face most of the liability associated with brownfields under federal and state law, landscape architects and other design professionals also face significant risks when working with contaminated sites. The most important issues to keep in mind include:

- **The Client**—Is the client experienced with brownfields? Does it have the financial capacity and patience to handle a potentially long and complex cleanup and design process?
- **The Design Team**—Do the other members of the team, especially your firm's subcontractors, have the experience, expertise, staff resources, and professional liability insurance necessary to avoid and manage brownfield-related risks?
- **The Contract**—Are there “flow-down” provisions from a prime contract or incorporated obligations that could put the landscape architect in jeopardy? Does the contract acknowledge that the design professional is not arranging for the disposal, treatment, or transport of contaminants or pollutants? That the landscape architect *cannot* and *will not* produce a “clean” site? Can the client indemnify the landscape architect, or is it a public entity or project-specific LLC? If the client can indemnify, does the provision extend beyond the statute of repose?
- **The Site**—How well has the site been tested and documented? Will geotechnical consultant reports, infrastructure assessments, toxicity reports, and other invaluable data be available *before* you need it? Is the site small or large? What types of activities or pollutants make this a brownfield site? For what is the client proposing to reuse the site?
- **Your Experience and Expertise**—Have you worked on these types of sites before? Are you familiar with regulations and clean-up programs in the jurisdiction where the site is located? Do your marketing and proposal materials, scope of services, fee schedule, and contractual limits of liability *all accurately* reflect your true expertise, project responsibilities, and exposure to risks over which you can reasonably control?

Appendix A

A client may be afforded protection under the Brownfields Amendments if it meets specific criteria enabling it to fall into one of the following categories.

(1) Bona fide prospective purchasers (BFPPs), or an entity that knowingly purchases a contaminated property after January 11, 2002, and:

- Performs “all appropriate inquiry” prior to acquiring the property;
- Demonstrates “no affiliation” with a liable party;
- Complies with land use restrictions;
- Does not impede effectiveness or integrity of institutional controls;
- Takes “reasonable steps to prevent releases” of hazardous substances;
- Provides cooperation, assistance, and access;
- Complies with information requests and administrative subpoenas;
- Provides legally required notices; and
- Does not impede performance of response actions or restoration work.
- Owners of a contaminated residential property who:

(2) Contiguous property owners (CPOs), or an entity who owns a polluted site, where the contamination originated from a contiguous or similarly-situated property not owned by the entity asserting CPO status. This provision protects parties that are victims of pollution caused by a neighbor’s actions. A CPO *cannot have knowledge* of the contamination at the time of purchase, and also has pre- and post-purchase obligations similar to those of a BFPP.

(3) Innocent landowners (ILOs) may fall under several categories:

- Have not and do not engage in activities that lead to release or threat of release of hazardous substances;
- Cooperate fully with the EPA by providing access and information and do not interfere with cleanup activities of either the EPA or the state;
- Do not improve the property in a manner inconsistent with residential use; and
- Comply with property use restrictions that may be placed on the property.
- Purchasers who acquire property without knowledge of contamination, and
 - Contamination was caused by a third party;
 - Purchaser made all appropriate inquiries but did not discover the contamination; and
 - Purchaser meets statutory conditions, pre- and post-purchase obligations.
- Governments who acquire contaminated property by escheat, other involuntary transfers or acquisitions, or by exercise of eminent domain authority by purchase or condemnation.
- Inheritors of contaminated property.



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