Zach Fein  
Niehoff Studio  
January 29, 2010  

**Industrial Urban Decay and Adaptive Reuse Potential**

**Abstract:**

Abandoned buildings and urban decay in general are problems that plague cities everywhere, and Cincinnati and the American Midwest face these problems to quite an extent. While adaptive reuse and preservation works well in many cases and is widely accepted and prescribed, abandoned large scale industrial sites face a more difficult set of problems that are often left unaddressed. The aesthetic, sub-cultural function, and potential contamination are amongst these issues, and publications over the past two decades have begun to address them as the unique qualities that they are. Aside from publications, these ideals have been instituted in practice in a select number of projects. By looking at the published works and case study examples, a prescriptive recommendation can be made that is applicable to abandoned industrial buildings everywhere, especially Cincinnati and the Interstate 75 corridor in particular.

The solution provided concerns approaching decaying industrial sites with a phased approach that considers and appreciates the status-quo in the short-term, while applying a modern and holistic adaptive reuse that has economic, social, and environmental benefits that trump the benefits provided by demolition of such structures. In essence, the abandoned industrial buildings that occupy the Mill Creek Valley of Cincinnati (along Interstate 75) serve a sub-cultural function and provide an important historical aesthetic that will likely never be reproduced. Through thoughtful design that function and aesthetic can be preserved while providing for even greater function and aesthetic that serve to benefit the surrounding neighborhoods.
Industrial Urban Decay and Adaptive Reuse Potential

Introduction:

Abandoned buildings present problems for many cities, especially those in the American Midwest. The issues associated with them are numerous and diverse, but in general contribute to difficulties in terms of revitalizing urban neighborhoods. In order to properly propose strategies for dealing with abandoned structures, consideration must first be given to understanding comprehensively the existing status of them; in other words, understanding why certain buildings are abandoned, and what role they play as abandoned buildings in the community. From there, strategies for renovation and/or adaptive reuse can be better tailored to fit the needs of the neighborhood. Urban decay is generally perceived as a negative element of urban form. However, examples of abandonment help to illustrate the importance of the interaction between human and architecture. Decay shows the effect of a change in a buildings functional program from one involving regular human usage to one of vacancy. Rather than simply viewing vacancy as a problem, it can be considered a starting point for reprogramming some building spaces. This has broader implications when consideration is given to urban context.

In essence, by understanding the aspects that created the current satiation of decay seen in so many urban neighborhoods, designs for revitalization can be made more comprehensive, and the chances for success can be greatly improved. Because of this, the primary research topic of this paper has a focus upon why it is important to understand abandonment and urban decay in a descriptive sense, and how first considering adaptive reuse is pivotal to revitalizing urban neighborhoods in a prescriptive sense.
In terms of abandonment and urban decay, there are two primary categories: residential and commercial spaces (that can generally be reused for similar programs with little adaptation) and industrial spaces (that consist of very specific program spaces that are often not easily adaptable). This research will look specifically at industrial areas. The reasoning for this is twofold; the first reason being that industrial reuse is a more difficult issue for designers to resolve, and the second being the vast quantity of such spaces in the American Midwest, including Cincinnati and the Interstate 75 corridor, specifically. In terms of reuse and/or revitalization, buildings and zones used previously for industrial purposes create a unique and complicated situation. The specificity of industrial buildings, coupled with often present contamination make standard reuse difficult. However, a massive amount of built infrastructure is salvageable if properly and carefully considered by urban designers; this can be done efficiently and provide economic, social, and environmental benefits. Only over the past two decades have researchers and designers begun to look more deeply into the problems of industrial decay, and proposed and enacted solutions. The following literature reviews and brief case study summarize experts works on this topic from descriptive and prescriptive perspectives.

An example of industrial urban decay in Cincinnati, Ohio.
Literature Review: "The Romance of Abandonment: Industrial Parks"

Architect and critic Hugh Hardy discusses the "Romance of Abandonment" in an article from the fall 2005 journal *Places*. The focus of the piece is on the aesthetic and experiential qualities possessed by the "plants, mines, mills and factories" of the Industrial Age. Importance is placed on the historical legacy such works of architecture have, as well as the subjective, yet dominant and startling beauty. In discussing the nature of reuse and development, these focal points are clearly represented. However, the piece proceeds to make other observations, such as the point that innovation is easily sparked by allowing remnants of the past to survive. ¹

Naturally, there is a problem associated with renovation or reuse of any historical buildings in terms of preservation of aesthetic. This problem is even greater when it comes to the "behemoths of heavy industry," as Hardy points out. The architecture was designed to specifically suit a single purpose, often times perfectly accommodating of machinery or processes housed within. Because of the unique design and often gigantic size they have a sort of "startling beauty." However, this makes reuse difficult, even in comparison to renovation of similar, or even older historic buildings. The lack of accommodation of new program leads into what Hardy identifies as the three main issues concerning reuse of heavy industrial complexes: "The nature of the reuse (what activities to include); the availability of funding; and the aesthetic approach taken."

There are two extremes in terms of industrial redevelopment. Hardy points out that complete demolition and new construction lies on one end, and preservation as a museum on the other. Between these are a variety of mixed uses, including "housing, retail stores, offices, and

entertainment venues.” Using the Landschaftspark in Duisburg, Germany as an example (because it had won a *Places* award in 2005) the author points out the interesting juxtaposition created by converting the lands around abandoned, decaying steel mills and coal plants into natural green space. Aside from the aesthetic, the environmental benefits associated with this reuse are often reason enough to pursue such plans. There are other rewards that Hardy points out, namely the potential to spur urban renewal in surrounding communities, create profit and a stronger urban tax base, and even encourage tourism - as a sort of monument to our nation's industrial past.

The second contributing problem associated with reuse is funding. There are often a large group of potential funding sources, and an even larger mix of groups and persons with concerns. Because of this preexisting setup any plans "require consensus among varied constituencies." The funding sources are often a combination of various private and public organizations, and thus renovation "requires a concerted effort by the surrounding community." Environmental factors also have a priority in when it comes to funding. In the United States contaminated places known as "brownfields" are subject to federally mandated remediation. Thus, funding is available for this aspect but often significantly slows a project. Even in the extreme case of complete demolition, this remediation work is a requirement in the case of most industrial sites. Hardy cites the problems associated with the Bethlehem Steel plant in Pennsylvania as a good representation of how environmental site conditions have the power to stall a project perpetually.

---

There are plenty of successful reuses of abandoned industrial era sites, though. In Birmingham, Alabama the Sloss Furnaces have become the only blast furnaces in the United States that are preserved as a museum of industry. A varied program of community uses - educational, cultural, and recreational programs - are currently undertaken at the site. The project was funded by public and private funds, and is now designated a National Historic Landmark. The aforementioned Bethlehem Steel plant, although stalled, was the site of interesting planning. It was once the second largest steel plant in the world, and proposals call for renovating the grounds as a casino, entertainment, and retail complex that would provide the financial justification for preserving the existing facilities. The Landschaftspark in Duisburg, the High Line in New York City, and the Promenade Plantée in Paris are a few more examples that illustrate the key points outlined by Hardy throughout his article. At Landschaftspark, which Hardy identifies as the most spectacular reclamation effort, the balance between the two extremes (demolition and static preservation) is at a perfect equity. The mix of nature and industrial ruin allows a supple modern use, while preserving the true character of the industrial facilities. The High Line and Promenade Plantée are other examples of this balanced juxtaposition.

On one extreme reuse are places like Sloss Furnaces, where the original purpose and character of the site are clearly preserved. On the other are the Tate Modern in London and Dia Beacon in New York. These sites offer hardly any notion of former industry. While still successful as renovations, the romantic beauty of the historic industrial ruin has been erased, and a completely new aesthetic has been applied to the stripped, blank canvas. Hardy arrives at the conclusion that preserving the existing and sinister beauty of industrial ruin should be a priority, and it can be quite successful.
While mammoth ruins of industry still dot the landscape of most industrial age cities, the processes observed at a number of sites have shown to be successful. There is value to reuse, not only in terms of revitalizing communities and returning profit, but also with regards to culture; local urban life, community, arts, and heritage are all greatly affected by reuse of abandoned industrial places. Through explaining the past, architects and developers can foster innovation, and the "rich history and offbeat aesthetic," of industrial sites are catalysts for that process. Much potential lies within these sites that exist all around the world, especially parts of the American Midwest, and specifically sites in Cincinnati.³

**Literature Review: Industrial Ruins: Space, Aesthetics and Materiality**

Tim Edensor, a researcher and professor at The Manchester Institute of Social & Spatial Transformations, discusses the "space, aesthetics, and materiality," of forgotten industrial architecture. Edensor focuses his book *Industrial Ruins: Space, Aesthetics and Materiality* on the abstract program that is so often possessed by abandoned architecture of the Industrial Age. Through both photographs and convincing narrative, Edensor shows how neglected sites accommodate certain activities that "over-designed spaces of the city," are incapable of supporting, and it is the disordered and fragmented sensuality of such places that leads to this. It is the ambiguity and surprise that makes industrial ruins an important cultural element, he argues. In the book's introduction, Edensor presents this statement: "I want to highlight how the contingent, ineffable, unrepresentable, uncoded, sensual, heterogeneous possibilities of contemporary cities are particularly evident in their industrial ruins.” While the author stops

short of suggesting best practice examples, it shows that there exists a certain character of importance with regards to industrial ruin.  

Edensor concludes by making a point that is not often considered by designers. His point serves as a critique of urban life, stating that we currently live "In a period in which strategies for arranging urban space seem insufficiently nuanced and notions of civic order are gaining a stranglehold which threatens to choke much of the life out of cities." He argues that over-design, be it demolition and replacement of industrial decay, or even adaptive reuse, leads to a sterile urban environment that possesses less character. By appreciating decaying industrial sites, designers allow residents to have "Other ways for using and reading the city, for making space in individual ways, creating paths and performing otherwise, sensing, fantasizing and desiring in the city."  

In summary, Edensor believes that (at least in the short-term) abandoned buildings can be left as is, and serve as unprogrammed leftover space that has a positive effect on the community as a whole. In Cincinnati and similar cities this already occurs, and the problem lies in perception. Urban decay is considered blight, and the sub-cultural service they provide is ignored. While technology and demand may not only make adaptive reuse easier in the long term, but also merit it, the short term purpose of abandoned structures should not be overlooked. Far too often does ignorance and/or negation of the positive contributions abandoned buildings offer to society lead to demolition and loss of historic fabric.

**Literature Review & Case Study: Manufactured Sites: Re-thinking Post-industrial Landscape**

---


Fein 8
Aside from the abstract and ambiguous concepts of aesthetic and unprogrammed functions, there are concrete and objective issues associated with abandoned industrial sites. In a recent book compiled by Niall Kirkwood, a professor of Landscape Architecture at the Harvard Graduate School of Design, some of these issues are studied and presented while the qualities of aesthetic and character are kept in mind. This is described in the introduction by Kirkwood, who states that "Two central themes of the book are the range of emerging technologies and design strategies used in reclaiming waste and contaminated urban sites and the creative alliances of technology and design that result." He continues throughout the book to discuss modern technology and how it specifically allows designers to approach industrial sites that are often contaminated. Kirkwood, with the assistance of several other contributors, points out several examples that are deemed successful in terms of the two main focus points of the book. Peter Latz, a landscape architect and contributor to the book, discusses a certain industrial ruin that was restored as an attraction within a park. He states that "The idea to develop the future out of human destruction has obviously existed for some time..." and continues, "We have to ask ourselves which spaces from among the dilapidated and redundant places we want to use and occupy, and which of those have to be changed by the mark of a cultural intervention or the remediation of historical contamination." Overall, Kirkwood and his contributing authors present a cohesive strategic guide for approaching abandoned industrial sites from a design perspective, and many of these sites are exemplary case studies for sites in Cincinnati, especially along the Interstate 75 corridor.6

The example discussed by Peter Latz in *Manufactured Sites* lies in the northern Ruhr Valley of Germany, and is the site of one of the most massive revitalization projects that has taken place anywhere in the world (Hugh Hardy also mentions this site as an example in the aforementioned article "The Romance of Abandonment: Industrial Parks"). Over 100 projects occupying nearly 600 acres have been undertaken as part of a massive framework plan that has a focus on not only bringing new life into the blighted area, but also on preserving the character and unique beauty of the industrial infrastructure that is characteristic of the region. The redevelopment that can be seen here is important in that creates a link between contemporary cultural and economic needs and the industrial past of the blighted remains. Rather than the popular approach of remediating blight, the formerly existing conditions of the Ruhr Valley were used as design. From the onset of the design process, a certain beauty was perceived amongst the ruins of industry, and this perception helped to guide designers.
The scope of the work at Duisburg-Nord contains elements of economic, social, and environmental sustainability; in fact these concepts are all inherent in the nature of reuse. From an economic standpoint, land and buildings that had ceased to operate entirely have now been returned to a use. Through fees, donations, and volunteer efforts the park itself can operate successfully, while the grander impact on the surrounding community is even greater. The hundreds of thousands of annual visitors have also contributed to new growth in surrounding business areas. Nearby housing, as part of the larger framework plan, has also contributed to economic growth. From a social standpoint, eliminating a massive, unproductive site in close proximity to neighborhoods contributes to the success of the social environment. The environmental benefits of such a project speak for themselves. Large amounts of chemical contamination that would have otherwise slowly dissipated into the environment causing adverse affects on the surrounding communities were instead dealt with in a way that would cause the least amount of side effects.\textsuperscript{7} To summarize, the overall framework plan instituted in the Ruhr Valley has created semi-urban spaces that have performed successfully over the past twenty years. The combination of some surviving industry, new housing, renovated housing, and business districts were critical to the success of the park areas that have become iconic tourist attractions. The interaction of these community elements is what has allowed the overall framework plan to perform successfully.

Conclusion:

The overall concept illustrated by the selected readings and the case study is the preservation of the unique aesthetic and character of abandoned industrial ruin, while producing a new program that works selectively within the context of that abandonment. That is, to accept what is considered by many as blight, and preserve that quality as not only an aesthetic characteristic, but also a historical symbol. Hugh Hardy points out why exactly urban designers should value abandoned industrial sites, and highlights several examples of successful approaches. Author Tim Edensor parallels the appreciation of aesthetic and nature of those sites, but counters and criticizes many adaptive reuses. His criticism is not counter-productive though, in that it helps form short- and long-term solutions that ultimately shape design decisions more efficiently in terms of economic, social, and environmental benefits. The last example, that of Niall Kirkwood and Peter Latz, and furthermore of Latz work at Duisborg Nord offers a comprehensive case study that is extremely applicable to specific buildings and entire neighborhoods in Cincinnati. In essence, a design solution for Cincinnati could best be influenced by gaining an understanding Edensor's and Hardy's points in the short-term, while utilizing Latz's and Kirkwood's points to formulate long-term goals. To summarize, in the short term designers should have an:

- Appreciation of the aesthetic of large industrial sites and buildings,

- Understanding of the sub-cultural program of abandoned buildings,

- Allowance of those activities.

In the long term, the goals should be:

- Adaptive reuse of abandoned and decaying industrial sites,

- Preservation of the aesthetical quality of those sites,

Fein 12
Selectively mixing that quality with new program,

Architectural interventions that allow for that program,

Interventions that not only respect the aesthetic of abandonment, but allow visitors to experience it and form a unique phenomenological reaction.

Adaptive reuses can be applied to sites that are seemingly not conducive to reuse by approaching the often overwhelming architecture of industrial ruin with an understanding of its ephemeral ability to function programmatically as well as an understanding of not only the aesthetic and historical qualities it often possesses, but the sub-cultural, unprogrammed activities that take place there. Abandoned architectural infrastructure can be thought of as is - decaying urban blight - yet become successful through thoughtful design consideration that balances short- and long-term goals. Urban designers can identify applicable buildings and neighborhoods, make architectural intrusions, and allow places to function with a balance of open, public spaces that surround both industrial ruin and newly programmed space. Industrial ruin can be approached from a design standpoint in order to show how buildings can exist as functionally dead pieces of architecture that not only have a positive effect on surrounding urban areas (as opposed to a negative effect so commonly attributed to vacant and abandoned buildings) but serve as public remnants of the transitory nature of civilization. That is, thoughtful design can both preserve the romantic aesthetic of abandoned industrial ruins, and create a space that is physically, economically, and culturally contributive to the surrounding context.\(^8\)

There are dozens of sites spread across several neighborhoods in Cincinnati in which the principals this research proposes could be applied. They lie mainly along the Interstate 75 corridor, where the majority of Cincinnati's active and abandoned industry exist. As master framework plans are developed, communities could best be served by including abandoned industrial buildings in phased short- and long-term design solutions.

Sources: