



Cleared for Development

Clare Kang
Master of Architecture 2014

Katherine Knapp
Master of Urban Planning 2014

Nolan Sandberg
Master of Landscape Architecture 2014

Julia Stuebing
Juris Doctor 2014

Recently planners, activists, and residents have begun asking if foreclosures have an effect on crime rates. The existence of such an effect could provide strategic guidance to community developers and organizers who are grappling with the ills of foreclosure and crime. Many community development corporations (CDCs) focus their limited resources on housing development instead of other tasks like CDCs, which has sparked debate about the proper roles of community development and organizing groups. If foreclosures and crime are linked, CDCs should develop strategies to combat foreclosure as a neighborhood safety imperative. Such strategies may take on more overt elements of community organizing and economic justice.

The Dow Sustainability Fellows Program is a result of a six year expendable gift from The Dow Chemical Company to the University of Michigan.

Introduction

A. The Opportunity

Masters and professional degree students chosen in a competitive process as fellows participate in “collaborative engagement activities and a substantial interdisciplinary team project” and receive a \$20,000 stipend. In addition to participating in co-curricular activities related to the environment, Dow

“We sought to understand the multi-dimensional nature of sustainability by focusing on environmental, economic, and practical issues involved in redeveloping a ten-block Detroit neighborhood.”

Fellows form interdisciplinary teams (4-6 fellows each) to draft a persuasive white paper that “develops a comprehensive stance or an analysis of options on a particular sustainability challenge of the team’s choosing, or a comparable deliverable approved in advance by the program director” (Planet Blue University of Michigan, 2014).

B. Our Goal

We sought to understand the multi-dimensional nature of sustainability by focusing on environmental, economic, and practical issues involved in redeveloping a ten-block Detroit neighborhood. Studying the environmental challenges and opportunities presented by Detroit’s changing landscape responds to the Dow Sustainability Fellowship Program, which encourages interdisciplinary thinking and the consideration of diverse stakeholder perspectives. Our team is made up of University of Michigan Masters and professional students studying architecture, urban planning, law, and natural resources and the environment.

For our Dow Sustainability Fellowship project, we created a book of our findings that we are sharing with stakeholders and academics in an effort to contribute to the dialogue about sustainable development and post-blight remediation in Detroit. Thinking critically

and mindfully about sustainability and its implications for the future, our goal was to apply our cross-disciplinary knowledge to developing solutions in Michigan.

Our book contains three parts: first, we explored the background and interests of stakeholders in the development of the property; second, we conducted a Phase I Environmental Site Assessment simulation; and third, we examined existing development proposals and analyzed the extent to which these proposals meet the interests of stakeholders and benefit human health and the environment. Here, we present an overview of our findings. The online version of our original book is available on the University of Michigan Planet Blue website (Planet Blue University of Michigan, 2014).

C. The Site

Our ten-block site of interest is located in Detroit’s Lower East Side. The site is bounded by Gratiot Avenue to the south, Mack Avenue to the north, Chene Street to the east, and the Eastern Market Complex and I-75 to the west. These boundaries position the site within a bleed-zone of the bustling Eastern Market and the heavily abandoned neighborhoods of the Lower East Side. A bleed-zone is the area surrounding an activity center that may benefit from proximity to the activity center but does not belong to the center. The site is not within a well-recognized neighborhood; however, it is located directly to the north of the McDougall-Hunt neighborhood. We chose this site because it was the first site to be cleared of blight by the newly created Detroit Blight Authority.

Methodology

Our research was largely structured around the Phase I Environmental Site Assessment requirements as described in ASTM Int’l E1527-05, and involved reviewing records, conducting site reconnaissance, and interviewing stakeholders. Phase I Environmental Site Assessments (“ESAs”) are an essential starting point for brownfield developments. Our goal in conducting the Assessment was to illustrate redevelopment in the neighborhood and provide a springboard for stakeholders conducting Phase I ESAs in the future. The Environmental Protection Agency considers the ASTM Int’l E1527-05 document an “interim standard” for Phase I ESAs, and it is widely relied upon by practitioners.

During our site walkthrough, we inspected the outdoor area of the site. No indoor inspections

were conducted. To better inform our research, we asked stakeholders questions about the environmental conditions of the site and about the economic history of the area.

Findings

A. Interviews

We interviewed Detroit Blight Authority Executive Director Brian Farkas, several local stakeholders, and a national expert in sustainability.

1. Clearing Blight

In February 2013, the Detroit Blight Authority (DBA) razed eight residential structures and two church buildings. The DBA's priority was public safety, including the risk of fires in abandoned buildings. We interviewed Mr. Farkas to learn more about the DBA's approach to blight remediation. He claimed that crime has decreased in the areas where they have worked. The DBA first found out who had legal title to the land, and then had neighbors sign a right of entry. In addition to razing structural blight such as abandoned houses and churches, the DBA cleared non-structural blight, such as brush. "If you can't see between blocks, then its prime for illegal dumping," said Mr. Farkas.

The DBA, which has marketed itself as being cheaper and better for development than past efforts to clear blight, clusters its activity in order to bring down the marginal cost of all of its activities. It had initially considered cutting costs by not removing basements. However, after learning that the practice was not commonly used, the DBA ultimately removed the basements as well. The areas where the home foundations once stood are now filled with soil. "The last thing we want to do is create an environmental hazard that's going to come back and bite us and our partners," said Mr. Farkas. According to its website, the DBA's major benefactors include the Skillman Foundation, DTE Energy Foundation, Marjorie S. Fisher Fund, Ajax Paving, Michigan State Housing Development Authority (MSHDA), and Rock Ventures LLC (Detroit Blight Authority, March 3, 2014). With this impressive list of partners in mind, Mr. Farkas noted, "We're not looking to cut corners."

Mr. Farkas made it clear that the DBA's scope is limited to blight elimination, and that it does not have broader development ambitions. Mr. Farkas explained, "our goal is to keep our heads down, and stay in our lane." The DBA aims to "eliminate blight in the shortest amount of time, at lowest cost possible, without endangering

public health or public safety." When asked about the DBA's long-term goals for the site, Mr. Farkas said "It's up to the people in the neighborhood as to the long-term use of the land; they have a stake in it."

2. Stakeholder Interests

We interviewed stakeholders, including many nearby business owners and the Director of School and Community Partnerships at the adjacent school. We attempted to reach additional stakeholders, including residents, city personnel, and the St. Paul African Methodist Episcopal Church, but they were unavailable. Our analysis of stakeholder interests is therefore incomplete and additional research is needed. The unavailability of these parties presents a challenge to any development plan going forward.

Stakeholders that we did reach, glad to see blight cleared from the site, have identified three major interests with respect to development of the newly cleared ten-block area: bringing people into the neighborhood, assurance that the area will be kept up, and infrastructure. Certain business owners also identified specific needs for parking or access for commercial vehicles.

Bringing people and businesses into the area is a major interest, as the area has been deteriorating in part due to the loss of local businesses.

"Gratiot is supposed to be the gateway to downtown," said Gary Corsi, owner of People's Restaurant Equipment Company, which has been in operation for nearly 100 years (Corsi, 2013). "You could pretty much find anything you want on Gratiot, when things were good," said Mr. Corsi (Corsi, 2013). Current business owners suggested that a housing development or big box stores might help increase commercial activity. They cited a Meijer superstore that recently moved into a different part of Detroit as a model. "If more people would come down here, then a lot of business would come back," said Mr. Corsi. Frank Germack, owner of Germack Pistachio Co., which began in 1924, agreed that first and foremost the area needs to be used (Germack, 2013).

Stakeholders want the site to be kept up. Several business owners stated that the neighborhood is relatively safe and that they have not experienced security issues. Still, people agree that clearing the brush and high weeds would make the area safer. "That's a chance for people to throw garbage, throw tires away," said Mr. Corsi (Corsi, 2013). Therefore, maintenance is needed. Specific ideas that accomplish this end, in addition to the proposals already mentioned,

include an athletic complex for Detroit Edison Public School Academy, farming, and livestock grazing. To realize its dream for a new “gateway to the Eastern Market,” Detroit Edison Public School Academy has been working with the Eastern Market Corporation, the City of Detroit, and community partners, including Greening of Detroit and RecoveryPark (Garvin, 2013). RecoveryPark was interested in expanding its farm plans to the area. However, it is no longer pursuing that option because the area is so sought-after. No specific proposals for livestock were mentioned.

Infrastructure was another commonly mentioned concern. Stakeholders also mentioned improved lighting, sidewalk repairs, trash pick up, and data lines. Jim Pellerito, owner of Pellerito Foods, Inc., noted that while there is lighting in the Eastern Market area, the surrounding blocks lack sufficient streetlight (Pellerito, 2013). “That’s been a complaint all along,” said Mr. Pellerito. Frank Germack described getting quality service and data lines into the area as “a tricky time,” and that better service would be helpful (Germack, 2013).

3. Environmental Interests

We also asked the stakeholders about environmental conditions on the site as part of our Phase I Assessment. Notably, certain potentially important sources—one of the few remaining residents and various local government officials—did not respond to our e-mails and telephone calls.

Mr. Farkas of the DBA said that the site was previously used for illegal dumping of tires, debris, mattresses, couches, and chairs. He said that the DBA first cleared non-structural blight, including the illegally dumped materials and brush, but brush is currently growing back on the land. After removing non-structural blight, the DBA removed structural blight, meaning the eight residential structures and two churches. Mr. Farkas said that the DBA removed all of the debris from demolition and removed the basements as well, filling them with soil. Mr. Farkas commented that the roads in the area are in decent condition, and that the site is connected to gas, electric, water, and sewage.

Germack Pistachio Company, Inc. owns several empty parcels on the site, on Wilkins Street and on Watkins Street. Mr. Germack observed the City raze some houses in the 10-block area over time—perhaps in 2002-2003. Based on common construction practices at the time they were originally built, those houses may have contained lead paint or asbestos.

Dan Carmody, the President of the Eastern Market Corporation, said that, except for the strip along Gratiot Street and Mack Avenue, the area has been mostly residential property. He did not know of any environmental incidents on the site.

We spoke with Jim Pellerito, of Pellerito Foods, Inc., which is located at 2000 Mack Avenue, Detroit. That property was formerly a gas station, and as a result of a suspected oil spill, Pellerito Foods, Inc. has completed a Phase I and a Phase II investigation. Pellerito Foods, Inc. did not share the degree of the environmental contamination found.



We spoke with Nancy Garvin, Director of School and Community Partnerships at Detroit Edison Public School Academy, which is located adjacent to the site. According to Ms. Garvin the area was previously a wholesale district, and the school was a tomato-ripening warehouse. When landscaping for the school began, building materials such as bricks were uncovered and carried away. The high school was previously Stroh’s Original Hops. Brownfield testing was conducted and tax credits were obtained. In the course of the testing, some contamination was found at the back corner of the property, which was remediated. Prior to being a wholesale district, the area was a sheep farm, so the soil

Fig. 8.1. Looking Downtown from Area of Study, Katherine Knapp.

Fig. 8.2. Existing Landscape, Katherine Knapp.

was in excellent condition. The former location of the Fredrick Douglass School may be of concern because it was stripped of its pipes and contained standing water.

Additional off-the-record comments made during our interviews suggested that the types of businesses formerly located in the area may have included an incinerator and a truck repair garage.

4. Economic and Environmental Interests Aligned

Academics around the state are studying environmental sustainability in great detail. Dr. Rick Foster, Co-Director of MetroFood at Michigan State University, set out a framework of three elements to talk about land use in Detroit: food production, energy production, and a return to nature through the creating green spaces (Foster, 2013). "I also think of green spaces in an economic sense," said Dr. Foster. Dr. Foster cited a goal of reducing the supply of homes to increase home value, which is one way to increase family wealth.

B. Records Review

We reviewed records to learn about the environmental history of the area. The types of structures or businesses that existed on the site may give hints as to the potential environmental conditions that exist today. As a part of this process, we reviewed Sanborn fire insurance maps, aerial photos, and land title records; we also conducted our own reconnaissance of the site.

1. Fire Insurance Maps

We reviewed Sanborn fire insurance maps dating from as far back as 1884. The 1897 map shows the land use before the full-scale industrialization process took over most of Detroit. A basket factory and a cigar factory were located within the site, and labeled as industrial land uses. More recently, our site was mainly used as a residential area, and St. Aubin Street and Wilkins Street functioned as the dividing lines between the industrial land use and the residential land use. However, within the residential blocks on our site, there were several auto repair shops and fuel storage spaces, which may present environmental hazards.

In addition the history of the site, we reviewed the Sanborn maps to learn about its surroundings. Due to the transboundary nature of environmental conditions, a hazard on a neighboring parcel could potentially affect air, water, or soil quality on our site. According

to the most recent Sanborn map from 1951, numerous coal yards were located along the railways on Dequindre. These coal storage yards present a high possibility of Total Petroleum Hydrocarbon (TPH) and Polycyclic Aromatic Hydrocarbon (PAH) contamination in the soil and the groundwater.

2. Aerial Photographs

We surveyed aerial photos from 1949 to 2013, and observed the rise and fall of the site. The density of houses in the neighborhood was closely correlated with the development and decline of railway transportation nearby. The Grand Trunk Western Railroad tracks are visible in the aerial photos from 1949 to 1961, and from the aerial photo of 1999, the tracks are obliterated from the surface.

The current location of the Detroit Edison Public School Academy was once the termination point of the Grand Trunk Western Railroad tracks, and likely one of the more highly contaminated areas in the neighborhood. As the industry along the railway continued to decline, a drastic change in the residential blocks began. In the 1999 aerial photo, more than 50% of existing houses were demolished. By 2010, almost all of the houses in the neighborhood had disappeared from the map.

Also notable is the fact that City Recycling Inc., a scrap metal recycler and processor, is located diagonally across the street from the site, and it used to be a Julius Knack Coal Company coal yard.

3. Land Title Records

Most of the site is currently owned by private individuals or their estates, churches, and the City. According to LOVELAND Technologies, started in 2011 to track the Wayne County Foreclosure Action, taxes have not been paid on sixteen of the 306 properties on the site, a little over five percent of the total properties.

C. Site Reconnaissance

We visited and inventoried the site in accordance with the Phase I requirements. While conducting the inventory, we looked for possible clues to environmental conditions and potential concerns. Specifically, we recorded the inhabitation of homes as they appeared from the street, as well as the conditions of non-motorized infrastructure. Through this process, we made first hand observations and identified what exists on the site today, including possible environmental concerns. Not all of the experiences from the site visit can be accurately



displayed in diagrams and photographs. For example, in walking through the site, multiple bicyclists and motorists waved and smiled to the team. While such experiences do not lend themselves to the Phase I assessment, they do encourage further exploration of social investments in the area.

D. Phase I Environmental Site Assessment

We simulated a Phase I Environmental Site Assessment (ESA) based on the scope and limitations of ASTM practice E 1527-05. We simulated a Phase I ESA for educational purposes only; because we are students and

on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions. (ASTM International, 2005).

Based on their potential to be harmful to human health, we found that RECs were present on the site, including abandoned houses, brick and asphalt alleys or driveways, and litter. Additional information from the City or other sources is needed about historic demolition practices on the site. If, for example, the houses historically contained asbestos and lead paint, and if the debris was left in the soil on site, the soil could be contaminated. In that scenario, cleanup may be required.

Based on our findings, we recommended that a Phase II Site Investigation be completed with soil borings, soil samplings, temporary monitoring wells, and water sampling. The blighted houses should be torn down or contained so that they do not pose a risk to the site. This recommendation, of course, is based on our simulated Phase I ESA only. An official Phase I ESA needs to be conducted to determine if a Phase II ESA is in fact necessary.

E. Engineering Controls

Engineering controls refer to physical modifications to the site to reduce or eliminate the potential for exposure to hazardous substances or petroleum products in the soil or ground water on the property (for example, capping, slurry walls, point of use water treatment). We studied the engineering controls for the site.

The majority of the ten-block area has been residential for as long as we were able to determine. Therefore we concentrated our research on the potential hazards for residential sites. The contaminant of largest concern for former residential properties is lead. The high presence of lead in residential properties is due to the prevalence of lead-based paint and leaded gasoline used in



Fig. 8.4. Site Reconnaissance, Katherine Knapp.

Fig. 8.5. Site Reconnaissance, Katherine Knapp.

not environmental professionals, thus we are not qualified to perform an official Phase I ESA. Therefore, we made clear that our report should not be relied on as a legal document or otherwise evidence of the status of the site.

This assessment has revealed evidence of Recognized Environmental Conditions (RECs) in connection with the Property. RECs are defined by ASTM Int'l E 1527-05 as:

The presence or likely presence of any hazardous substances or petroleum products

G. Development Opportunities

1. Detroit Future City Framework

DFC is a landmark planning framework that provides a long-term vision and sets forth ambitious goals for the City of Detroit, with generous attention to the current context and community input. In the midst of the City's Chapter 9 bankruptcy filing, DFC's visions for the future seem ever more groundbreaking. While it may not be implemented immediately, it is valuable because it illustrates goals and visions that the community has for its future. For this project the DFC was extremely beneficial in that it showed what environmental, social, and economic concerns should be analyzed when planning for the future of the site.

The DFC focuses on five topics for future development in Detroit: City Systems, Economic Growth/Land Use, Neighborhoods, and Public Land are considered (Detroit Works Project 2013). When we looked into the implications of each of these topics for our site, we discovered that the site's future is not clearly determined within the DFC. As mentioned above, the site is situated in an interesting bleed zone of the Eastern Market anchor and the heavily abandoned lower-east side neighborhoods. Therefore, without creative, persistent advocacy and planning, it could easily miss the redevelopment and reinvestment opportunities present in the Eastern Market anchor (Detroit

“...without creative, persistent advocacy and planning, it could easily miss the redevelopment and reinvestment opportunities present in the Eastern Market anchor.”

Works Project 2013, 174-177). Our study may be able to assist in determining the future of the site within the context of the DFC, as it will assist in determining the development potential of the site within the goals for City Systems.

The City Systems chapter of the DFC lays out a design for Detroit to transform its landscape into the backbone for 21st Century Infrastructure. The DFC sees strategic reinvestment in Detroit's infrastructure as essential to meeting the needs of current citizens and promoting growth in Detroit

The site is included in an area designated for Renewal and Maintenance over the next 20 years. This designation is set for: Service Level: Core service level at the same or better quality

Actions: Fully maintain and renew at current level or upgrade if required

Outcomes: Visible neighborhood with same or increased capacity. (Detroit Works Project, 2013, 175-176).

The neighborhood east of the site is recommended to undergo Replace, Repurpose, or Decommission. Under this recommendation the city systems, such as water, sewer, and transportation systems will be removed or used for another purpose (Detroit Works Project, 2013). Because the site is on the boundary of



Fig. 8.6. Plan of Existing Infrastructure, Nolan Sandberg.

the Eastern Market zone, if the site is found to be economically, socially, and environmentally positioned for redevelopment, it can easily be included within the investments targeted for the East Market zone. On the other hand, if the site is not well positioned, then it could be pulled into the Lower East Side Neighborhood zone. While neither zone is “good” or “bad”, they do envision drastically different futures for the site.

2. Brownfield Opportunity

A developer of the property may benefit from the Brownfield Redevelopment Program administered by the Detroit Economic Growth Corporation. Under Michigan's Public Act 381 of 1996, developers of contaminated, blighted, or functionally obsolete properties may be eligible for Tax Increment Financing reimbursement

for environmental and non-environmental activities. We did not encounter Brownfield proposals in the existing plans that we reviewed, but it may be a useful opportunity for future developers. To qualify for the program, a site must be a “facility” as defined by the Natural Resources and Environmental Protection Act.

Environmental Quality, 2006). This includes parcels that are “adjacent or contiguous to” a site where their development would increase the captured taxable value of the site (Michigan Department of Environmental Quality, 2006).

H. Development Challenges

Obtaining title, communicating among stakeholders, and funding are challenges to development of the site (see infra, Section III, Part A). In order to develop the property, a developer will need to obtain title to the entire area. However, parties have encountered difficulty determining who has title to each of the lots. Communication and combating misinformation is another challenge in the development process, creating a need for education. A developer may benefit by educating stakeholders about proposals in order to garner support and meet the various interests. Finally, funding will be needed for any developer that goes forward with the project. Many stakeholders have expressed concern that the City of Detroit may lack the capacity to support development with infrastructure improvements, due to its lack of funds and preoccupation with the current bankruptcy proceedings.

Looking Forward: Existing Plans

We reviewed three existing proposals for the site. As reference materials, we also studied several proposals that address revitalization in other parts of Detroit. To get a better idea of what the proposals for the site would look like, our team created artist renderings of each plan.

A. The Bloody Run Creek Greenway Redevelopment Project: Pond Confluence

Detroit Collaborative Design Center
Partners: The Kresge Foundation; McCormack Baron Salazar; NTH Consultants, Ltd.; Adi Shamir; The Mannik & Smith Group, Inc.; Urban Resource Alliance; Zachary & Associates, Inc.; Wladek Fuchs

The Bloody Run Creek Greenway Redevelopment Project plan called for 3,500 acres of redevelopment throughout the area to address stormwater management and leverage private investment in many areas including renewable energy, food production, housing, retail, and historic preservation. The first pass of this plan included the daylighting of the Bloody Run Creek with the confluence of the two legs of the creek creating a central pond situated right on top of our site. Daylighting refers to the opening of a waterway that was previously

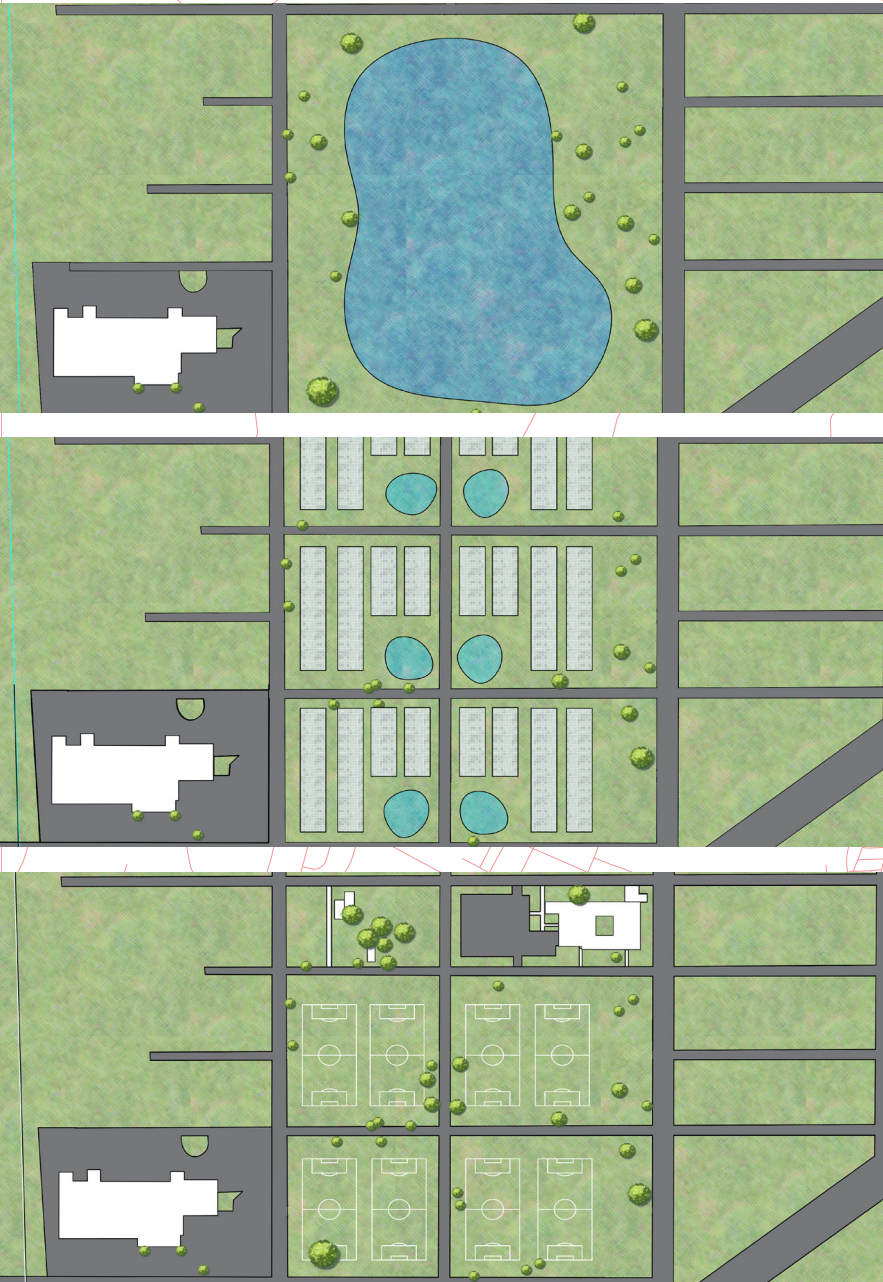


Fig. 8.7, 8.8, and 8.9. Existing Site Plan Proposals: Pond Confluence, Greenhouses, and Soccer Fields, Nolan Sandberg

It also has to be a “property for which eligible activities are identified under a brownfield plan that was used or is currently used for commercial, industrial, public, or residential purposes, including personal property located on the property, to the extent included in the brownfield plan” (Michigan Department of

covered due to human activity, such as a road. This pond would serve as a central detention basin for the entire area, but also as a gathering space for events and activities. Surrounding the pond would be sustainable community housing with a walkable center near Gratiot. There would be large tracts of photovoltaics and wind turbines to power the development.

After testing, it was determined that the creek was too contaminated to unearth, and a second plan developed by Mannik & Smith, which called for a reduced development of 725 acres. Instead of daylighting the creek, the plan references the creek by recycling stormwater runoff into a stream system. This would be a seasonal water system and the water would be directed along manmade canals to the same central pond, where it would be pumped back into the beginning of the stream system. The pumps would be run by the renewable energy systems, and when urban agriculture is established, irrigation water could be diverted to these areas.

B. RecoveryPark Plan: Greenhouses

Mannik & Smith Group

RecoveryPark Plan, developed by Mannik & Smith focuses on 32 acres of land directly north of our site. The plan emphasizes agriculture as well as aquaculture (fish farming). It is a plan for food production, but still fulfills the water management goals of other plans. In exchange for public easements in the corridor between Chene and St. Aubin streets, RecoveryPark would create detention ponds on each block. These ponds would be fed by stormwater runoff through site re-grading of the surrounding area. Surrounding the ponds would be a series of greenhouses that could be connected to irrigation water drawn from the ponds. With these ponds, over two million gallons of water can be diverted from the city's stormwater system, thus promoting on-site stormwater quantity control and reducing the demand on the city's stormwater system during storm events. In addition to the greenhouses, aquaculture tanks would be built to farm over five million pounds of fish annually. Food processing facilities would be set up for every 100 acres of land, and the Chene Ferry market building would be redeveloped and reopened to sell the produce and fish.

C. The City's Plan: Soccer Fields

City of Detroit

Due to its proximity to the Edison Public School Academy, the City of Detroit has identified the



site as an excellent location for sports fields. Detroit Edison Public School Academy has already obtained a \$250,000 grant in order to begin exploring a plan to build athletic fields on the site, and it is partnering with the Eastern Market Corporation and potentially other community partners (Garvin, 2013). Because of this, Mannik & Smith has restricted the

Fig. 8.10, 8.11, and 8.12. *Renderings of Existing Site Proposals*, Nolan Sandberg.

RecoveryPark plan to make room for the series of well-maintained sports fields adjacent to the school.

Evaluation

We evaluated how well these plans address the economic and environmental interests that we identified in our report. Economic interests include bringing people into the neighborhood, leveraging proximity to the Eastern Market District, improving infrastructure, and making sure that the area will be maintained, which is tied closely to an environmental interest in eliminating illegal dumping. Additionally, an environmental interest is addressing lead that may potentially be located in the soil or groundwater through phytoremediation or through capping and sealing.

The Bloody Run Creek Greenway Redevelopment Project may be a strong enough attraction to bring people into the neighborhood and provide additional recreation space to programmed activities in the Eastern Market District. A pond development could function as a relaxing and recreation center for visitors, workers, and neighbors visiting the Eastern Market. After getting locally produced gelato at the Market, a young family could take their treats to the pond for the afternoon. The fact that housing is included in this plan increases the likelihood that infrastructure would be improved—including repaired sidewalks and roads and the neighborhood might get more attention from utilities providers. There is a risk, however, that the pond could become a target for illegal dumping and might require a great deal of upkeep. We need to find out who would be responsible for maintaining the pond. Would the City mow the grass around the pond? What would the neighborhood be responsible for? There is also the issue of lead. If unsafe amounts

of lead are present in the soil and groundwater, research would be needed to find out whether and how the lead can be either remediated or contained from contaminating the pond.

RecoveryPark and the City Plan are achievable simultaneously, so we evaluated them together. RecoveryPark and the athletic fields would likely draw people to work and play or watch games, respectively. In order to build the soccer fields, the impaired sidewalks and crumbling alleyways would need to be removed. The soccer fields may also provide incentive for the City or the school to install new streetlights in the area. The area will likely be kept up by the school, and therefore less likely to become a target for illegal dumping. The site's safety and maintenance would benefit from school programming on weekdays and from local recreation leagues during the weekends. Beneath the athletic fields, potential lead in the soil and groundwater could be addressed through capping and sealing. In RecoveryPark, in addition to capping and sealing, phytoremediation may also be possible.

In conclusion, while the existing plans appear to serve certain environmental and infrastructural interests that we identified, there is more to learn about the site and the proposals. The environmental conditions of the site have not yet been fully explored. Moving forward, planners and developers should work with the Department of Buildings, Safety Engineering and Environment on demolition, site plans and zoning. Additionally, there are considerations outside the scope of our report that merit attention by developers, such as efforts to create opportunities that engage the site's residents and neighbors. One such method may be by leveraging existing relationships between local business owners and community leaders and residents. ■

Acknowledgments

We are grateful for the support of the Dow Sustainability Fellows Program, and in particular Greg Bond of The Dow Chemical Company and the University of Michigan Graham Institute. We thank the following individuals for their time, knowledge, and kindness: Dan Carmody, Eastern Market Corporation; Gary Corsi, People's Restaurant Equipment Company, Inc.; Charles Cross, Detroit-Mercy University; Rick

Foster, Professor at Michigan State University; Nancy Garvin, Detroit Edison Public School Academy; Frank Germack, Germack Pistachio Co.; Eric Grosinger, Kaps Wholesale; Jessica Kanalos, Detroit Economic Growth Corporation; Kit McCullough, University of Michigan; Jim Pellerito, Pellerito Foods, Inc.; Virginia Stanard, Detroit-Mercy University; and Gary Wozniak, RecoveryPark.

References

- ASTM International. (2005). E 1527.
- City of Detroit. (n.d.) City of Detroit. Detroit city code, chapter 61
- Corsi, G. (2013, October 11). Interview by J Stuebing. Interview with owner of People's Restaurant Equipment Company, Inc.
- Detroit Blight Authority. (n.d.) Learn more. Retrieved from <http://www.blightauthority.com>
- Detroit Works Project. (2012). Detroit future city plan. Retrieved from City of Detroit website: <http://detroitworksproject.com/the-framework/>
- Detroit Works Project. (2012). Detroit future city plan: city systems. Retrieved from City of Detroit website: http://detroitworksproject.com/wp-content/uploads/2013/01/DFC_Plan_City-Systems.pdf
- Foster, R. (2013, September 5). Interview by J Stuebing. Interview with Co-Director of Metro Food, Michigan State University.
- Garvin, N. (2013, November 25). Interview by J Stuebing. Interview with Director of School and Community Partnerships at Detroit Edison Public School Academy.
- Germack, F. (2013, October 17). Interview by J Stuebing. Interview with owner of Germack Pistachio Co.
- Goldowitz, I. S., & Goldowitz, G. (2006). Phytoremediation of lead-contaminated soil in the urban residential environment using seed mustard. *Contaminated Soils, Sediments, and Water*, 10(1007), 271-276.
- Jae-Min, L., Salido, A., & Butcher, D.J. (2004). Phytoremediation of lead using Indian mustard (*Brassica juncea*) with EDTA and electrodrugs. *Microchemical Journal*, 76(10), 3-9.
- Michigan Department of Environmental Quality. Michigan Department of Environmental Quality, (2006). Frequently asked questions of the department of environmental quality about the brownfield redevelopment financing act 1996 pa 381. Retrieved from website: [http://www.cityofnovi.org/resources/Library/Minutes/Council/2007/AgendaPacket070604s/Frequently Asked Questions.pdf](http://www.cityofnovi.org/resources/Library/Minutes/Council/2007/AgendaPacket070604s/Frequently%20Asked%20Questions.pdf)
- Michigan State University College of Engineering. (2002, August 14). Technical outreach services for communities. Retrieved from [http://www.egr.msu.edu/tosc/dutchboy/factsheets/What is capping.pdf](http://www.egr.msu.edu/tosc/dutchboy/factsheets/What%20is%20capping.pdf).
- Planet Blue University of Michigan. (2014). Cleared for Development. Retrieved from <http://sustainability.umich.edu/media/files/dow/Dow-Cleared-For-Development.pdf>
- Planet Blue University of Michigan. (2014). Masters & professional degree fellowships. Retrieved from <http://sustainability.umich.edu/education/dow/masters>
- Pellerito, J. (2013, October 10). Interview by J Stuebing. Interview with owner of Pellerito Foods, Inc.

References for Strategic Demolition

- AlHajal, K. (2013, February 15). Detroit Blight Authority cuts costs of demolition nearly in half as it looks to clean up the city. Retrieved December 8, 2013, from m live: http://www.mlive.com/news/detroit/index.ssf/2013/02/detroit_blight_authority_cuts.html
- Beshouri, P. (2013, February 1). Confusingly Cleared. Retrieved December 8, 2013, from Curbed: Detroit: <http://detroit.curbed.com/archives/2013/02/confusingly-cleared.php>
- Beshouri, P. (2013, February 14). 'Detroit Blight Authority' to Revolutionize and Privatize the City's Demolition. Retrieved December 8, 2013, from Curbed: Detroit: <http://detroit.curbed.com/archives/2013/02/detroit-blight-authority-to-revolutionizeprivatize-detroits-demolition.php>
- Beshouri, P. (2013, August 21). Fourteen Brightmoor Blocks Saved From Blight and Brush. Retrieved December 8, 2013, from Curbed: Detroit: http://detroit.curbed.com/archives/2013/08/fourteen-brightmoor-blocks-saved-from-blight-and-brush.php#reader_comments
- Bloomberg News. (2013, May 30). Detroit's survival depends on destruction of housing, grassroots leaders say. Retrieved December 8, 2013, from Crain's Detroit Business: <http://www.crainsdetroit.com/article/20130530/NEWS01/130539995>
- Burns, G. (2013, February 2). Mysterious land clearing underway in Detroit; Bing's office tight-lipped. Retrieved December 8, 2013, from m live: http://www.mlive.com/news/detroit/index.ssf/2013/02/mysterious_land_clearing_under.html
- Carey, N. (2013, July 25). Detroit area's battle with blight may be key to survival. Retrieved December 8, 2013, from Reuters: <http://www.reuters.com/article/2013/07/25/us-usa-detroit-blight-idUSBRE96O02T20130725>
- Detroit Land Band Authority. (2013, September). Detroit Hardest Hit Fund Strategic Plan. Detroit Michigan: City of Detroit.
- Lewis, M. (2013, October 29). On the Ground: Clearing blight, uncovering assets in Brightmoor. Retrieved December 8, 2013, from model D: <http://www.modeldmedia.com/features/ontheground102913.aspx>
- Melchior, J. K. (2013, March 6). Balling Blight in Detroit: A new private-public partnership succeeds where government has failed. Retrieved December 8, 2013, from National Review Online: [http://www.nationalreview.com/articles/342267/battling-blight-detroit-jillian-kay-melchior?splash=Muller, J. \(2013, October 9\). Bill Pulte: From Home Builder to Detroit's Unlikely Blight Buster. Retrieved from Forbes.com: <http://www.forbes.com/sites/joannmuller/2013/10/09/bill-pulte-detroits-unlikely-blight-buster/>](http://www.nationalreview.com/articles/342267/battling-blight-detroit-jillian-kay-melchior?splash=Muller,%20J.%20(2013,%20October%209).%20Bill%20Pulte:%20From%20Home%20Builder%20to%20Detroit's%20Unlikely%20Blight%20Buster)
- Pinho, K. (2013, February 21). Pulte leads nonprofit Detroit Blight Authority to clear city of vacant buildings. Retrieved December 8, 2013, from Crain's Detroit Business: <http://www.crainsdetroit.com/article/20130214/NEWS/130219920/pulte-leads-nonprofit-detroit-blight-authority-to-clear-city-of-#>
- Reindl, J. (2013, July 1). One of Detroit's largest private blight-cleanup blitzes gets under way in Brightmoor. Retrieved December 8, 2013, from Detroit Free Press: <http://www.freep.com/article/20130701/NEWS01/307010121/>
- Reindl, J. (2013, July 7). Young Bill Pulte sees a future in fighting Detroit Blight. Retrieved December 8, 2013, from Detroit Free Press: <http://www.freep.com/article/20130707/BUSINESS06/307070057/>
- The Long Term Planning Steering Committee. (2012). Detroit Future City: Detroit Strategic Framework Plan. Detroit: City of Detroit. Retrieved April 2013, from <http://detroitworksproject.com/wp-content/uploads/2013/01/The-DFC-Plan.pdf>
- Zillman, C. (2013, July). Cleanup crew: Honigman Miller lawyer takes a lead role in a nonprofit's innovative drive to clear Detroit's abandoned lots. Retrieved December 8, 2013, from The American Lawyer: <http://clairezillman.com/?p=184>