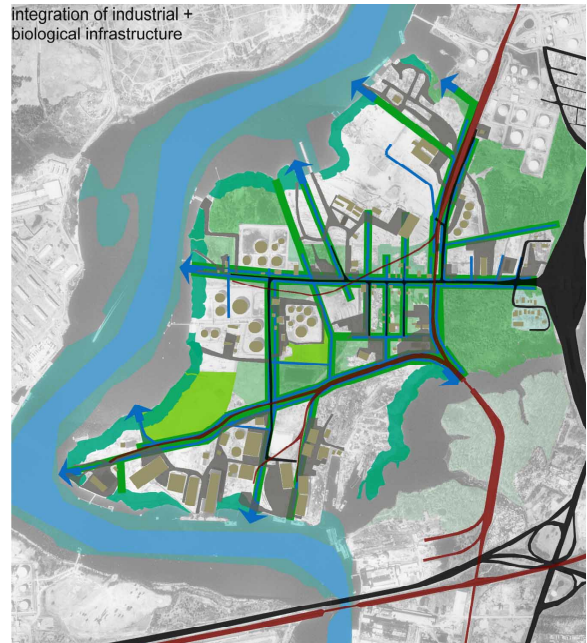


## Money Point: a Model of Urban Practice

This essay argues for a model of architectural practice capable of producing a new kind of industrial urbanism. The Money Point project, an interdisciplinary process of regenerating a 330-acre contaminated and underutilized industrial territory along the Elizabeth River in Tidewater Virginia, is examined as an innovative urban model for the co-existence of waterfront industry and ecological regeneration (fig.1). Although ecology and industry are often considered mutually exclusive, this conception can no longer be the case if we wish to sustain our current cultural conditions and a healthy environment for inhabitation by all species. This co-existence model is possible through the creation of an unlikely civic alliance, diverse disciplines truly collaborating, architects creating a new role for design, and methods of analysis and design that require working across territories and scales while revealing unseen connections. Rather than produce a *big idea*, this critical method results in a series of interrelated ideas at various scales. A secondary claim maintains the value of linked academic inquiry and community collaboration to both enrich the research and improve the world beyond the academy.

### Money Point

Located on the southern branch of the Elizabeth River, Money Point is a peninsula of large industrial parcels and a primarily low-income minority population of approximately 250 residents. The Elizabeth River, part of one of the busiest military and commercial ports in the world, has been identified as a toxic "Region of Concern" and a threat to the health of the Chesapeake Bay.<sup>i</sup> A wood treatment facility fire in 1967 released vast quantities of creosote into the River at Money Point and contributed to its current contaminated state, with high concentrations of polycyclic aromatic hydrocarbons, low biodiversity, and deformity and liver cancer in fish. Creosote is also present in on-shore soil and groundwater. An environmental non-profit group, the Elizabeth River Project, has been working with governmental agencies to enlist community partners to voluntarily clean-up contaminated offshore sediments at Money Point and to prevent recontamination from uplands.



1 Money Point co-existence plan

The Money Point project did not begin as a typical architecture or urban design project might. There was no request for qualifications, request for proposals, or design competition as one would expect in a public process. There was no developer or public/private consortium as one would expect in a private development. Instead there was the Elizabeth River Project—committed to cleaning up and restoring a highly contaminated river linking the cities of Norfolk, Portsmouth and Chesapeake, Virginia. ERP had assembled a Taskforce of Money Point residents and businesses, and federal, state and local government and regulatory agencies<sup>ii</sup> to plan a remediation process for the most highly contaminated area of River bottom and adjacent uplands. The Institute for Environmental Negotiation was facilitating the Taskforce process, and engineers from Science Applications International Corporation (SAIC) were enlisted to develop a Sediment Remediation Plan. An architect, landscape architect or urban designer was not assisting with the land restoration portion, since ERP was not aware of what comprehensive analytical and design skills could bring to such a project. Because

the Institute for Environmental Negotiation had previous positive experiences working with academic designers, an informal meeting was set up between the non-profit organization and interested architecture professors. Once convinced of the value of design, the architects' design work became a critical component in a two-year community process envisioning a sustainable future for Money Point. Since there was no funding for design services other than engineering consultants, the architects prepared a proposal to assist the non-profit organization and received a grant from the Virginia Environmental Endowment.<sup>iii</sup> Although only ten months into the project, it is intended that the collaborative process, supporting principles, design strategies and ultimate changes to the place will be a model for environmentally sustaining development along the entire Elizabeth River and beyond.



2 Scrap yard and wetland on Money Point

### **A model of practice: Unlikely civic alliances**

By analyzing the ongoing Money Point process, it is possible to reveal a number of relationships and methods crucial to this innovative model of practice. Complex and unlikely partnerships are increasingly developing around difficult urban projects nationally. The goals and physical design solution are often a direct result of the creative alliances forged around a project. For instance, the Money Point Taskforce includes an environmental non-profit organization; community members—residents, property owners and businesses; the public sector—federal, state and local regulatory and government agencies, and City and regional planning departments; and professional technical and design consultants from the private and academic sectors. The “problem” and de-

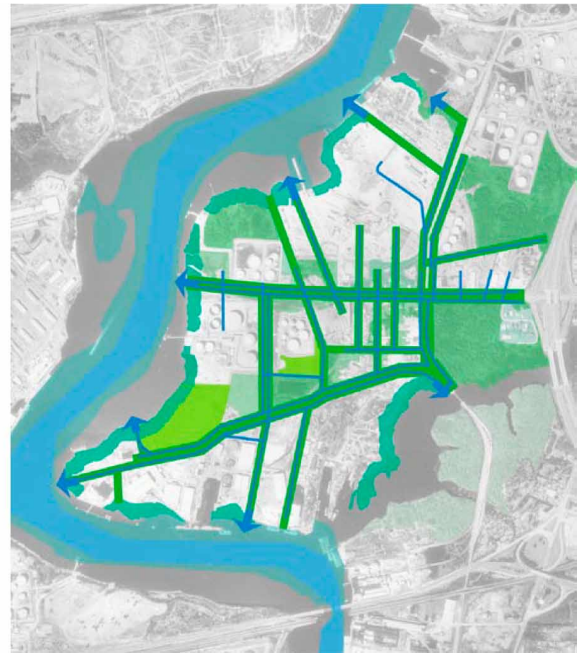
sign solution is broadly conceived, informed and sometimes tempered by diverse expertise and allegiances. The Money Point plan is designed as an integrated network of distinct components that different sectors can implement through grants or their own funds. Although the whole network plan could not be singularly implemented due to both a lack of resources and multiple ownership issues, the incrementally constructed pieces will add up over time. For example, portions of a proposed continuous riparian buffer have already received funding and individual property owners have committed land to long-term conservation. It is important to note that the industrial property owners would never have voluntarily reconstructed a wetland or planted a vegetated buffer without being part of a larger “non-partisan” initiative, just as the City of Chesapeake would never have proposed an ambitious environmental plan on private industrial property. By conceiving of a common future with the assistance of a designer to help imagine and represent a possible physical reality, participants were able to look beyond their own limited interests. It is important to note that intentions and actions are not synonymous, however, and time will tell whether parties will follow through with their voluntary commitments once regular Taskforce meetings end and alliances are less structured.

### **Diverse disciplines working together**

Just as unlikely civic alliances produce ambitious plans for action, the Money Point project involves many disciplines working together in unusual ways early in the analytical and design process. For example, the architects worked with consulting scientists and engineers from Science Applications International, City civil engineers and planners, negotiators from the Institute for Environmental Negotiation, environmental regulators from the EPA and Virginia Department of Environmental Quality, and the Elizabeth River Project’s staff of marine biologists, environmental educators and activists. Together they analyzed existing conditions, integrated contamination remediation and environmental restoration strategies, and proposed sustainable design concepts that would not have emerged otherwise.



3 Existing infrastructural network (l)



Proposed biological network (r)

For instance, the architects were not aware of how important healthy oyster reefs are to River restoration, but the ERP marine biologist exposed their significance and suggested their restoration at Money Point. Now the restored oyster reefs are an important educational opportunity for visitors to the planned Learning Barge. Interdisciplinarity is not a new idea, but frequently urban projects involve individual disciplines working in parallel rather than collaborating to generate unforeseen possibilities.

### **New roles for designers**

The role of architect and relationship to “client” is another unconventional aspect of the Money Point project. Supported by an external environmental grant and offering design services to the ERP and the Taskforce, the architects are operating outside the limitations of a typical client-based commission. Although part of a complex public process with diverse stake holders, the client’s often narrow interests (primarily economic in the private sector and political in the public sector) do not limit the possibilities explored and design solutions proposed. Questions of “who pays” and “how we implement this” are not the starting point. The architect is able to act as a nonpartisan environmental instigator and synthesizer of collective goals. Sometimes “facilitator” is used

to describe this role, but that term suggests a more passive stance rather than one that works with others to make specific physical design proposals. Instead the architect identifies opportunities for meaningful involvement, often with group and populations that would have no access to design services and often little awareness of the benefits that such input could offer. In this model of practice, the architect is not a passive professional waiting for unsolicited commissions or merely responding to already formulated roles through the RFQ or RFP process. By identifying a condition where her insights and skills might be particularly useful and significant, the architect finds a way to structure and financially support her involvement—a creative and ethically charged way of making things happen.

### **New methods of analysis**

Complex urban projects require innovative forms of analysis to reveal existing conditions and forces, and to project relevant futures. The design process at Money Point employed an analytical method with two primary intertwined aspects: operating across nested territories and scales, and revealing unseen connections over time. By considering the past, present and future within overlapping scales, a web of critical ideas emerge.



4 Learning Barge on the Elizabeth River

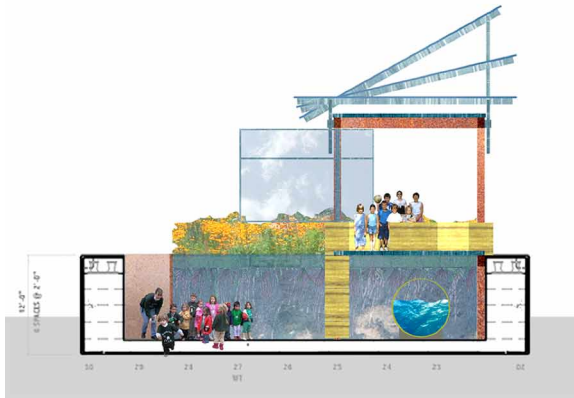
### Operating across territories and scales

The work began with a process of seeing, (re)presenting, and analyzing conditions at five territorial scales: the Chesapeake Bay watershed, the Tidewater Virginia region, the Hampton Roads metropolitan area, the south branch of the Elizabeth River, and the Money Point peninsula. The ready availability of digital maps from diverse sources, such as the USGS, NOAA, GIS and City zoning and land use maps, allows one to synthesize complex and detailed information with direct observation. Sequential diagrams are drawn on layered aerial photographs and maps to analytically depict relationships between complex conditions at Money Point, such as topography, hydrology, ecological and infrastructural systems, impervious area, property ownership and land use over time. This method challenges limitations of the property line or study area, and demonstrates how what lies beyond relates to what is contained within.<sup>iv</sup> For instance, it becomes clear how contaminated storm water and surface runoff at Money Point contributes to the non-point source pollution problem in the Chesapeake Bay or how the construction of Interstate 464 severed the Money Point community from the City and led to its decline. By working simultaneously at multiple territories and scales, information and ideas also transfer. When thinking across time and territories, one cannot help but consider complex social, economic, ecological and architectural issues. Specific material conditions, such as existing vegetation and building materials, become connected to other scales. Both aerial and eye-level photographs are a way of framing and revealing materials and conditions that others may not see. Although many Taskforce participants live or work in Money Point, they explain that they have not “seen” or understood Money Point as revealed in the analytical process.

### Revealing unseen conditions

The reciprocal analytical and design process is charged with making people aware of what they cannot see, such as invisible toxins, sub-surface water flow, the inextricable link between natural and constructed systems, and even time. Creosote from the 1967 spill seeped deep into the soil and river bottom and has a huge impact on water quality and habitat, but visible evidence is unseen by human eyes. The immediate Money Point area is affected, while toxins from the spill contaminate and implicate the territory downstream. By making the pollution remediation process visible, one can understand the interconnectedness of territories ecologically, socially, politically, and economically: the local site, Hampton Roads region, Chesapeake Bay watershed and Atlantic Ocean beyond. Non-point source pollution from storm water runoff, atmospheric fallout, and surface runoff can be revealed as well. Hydrology is just one component of the natural systems that connect the site to regions beyond. Ecological change on site can be linked to the extreme reduction in wetlands on the Elizabeth River, as well as the near complete loss of oyster reefs in the River and Chesapeake Bay over the past century (the oyster population has been reduced by as much as 99% due to over harvesting, pollution and disease).<sup>v</sup> Understanding the connection between economic, cultural and ecological change reveals linkages to past and ongoing physical changes. Human habitat has been impacted as well. For instance, the near disappearance of the residential community at Money Point is linked to a number of “external forces”: national transportation changes, seen in the replacement of railroads by highways, required extensive building demolition to make way for the construction of Interstate-646; industrial activity at Money Point shifted from labor intensive industries such as fertilizer and wood creosoting to bulk warehousing and gasoline storage tanks. Certainly connected to global economic forces, this shift no longer required the extensive manual labor that was previously supplied by a large number of residents. These interconnected invisible forces are crucial to the analytical and design process at Money Point. Mapping the currently fragmented relationship between natural and constructed systems allows one to imagine integrated future possibilities. By depicting, overlaying and analyzing the existing built infrastructural system of railways, highways, roads, and drainage ditches, strategies for integrating a restored

biological network of riparian buffers, bioswales and habitat corridors within that existing system emerge (fig.3). In this way, industry and ecological regeneration can co-exist at Money Point.



5 Learning Barge roof plan + sections

### Learning Barge

At a smaller scale, the relationship between natural and constructed networks is revealed in the Learning Barge component of the project (figs.4+5). The Learning Barge is a moveable didactic device designed to work with natural systems—sun, wind, water, earth and biology. Photovoltaic panels will provide power, rain-water and wastewater from onboard sinks and toilets will be collected and filtered into the floating wetland, and recycled industrial materials will be used to construct the classroom. The Barge is also a platform for viewing and teaching about the process of river sediment remediation, onshore infrastructural improvement and the sustaining redevelopment of human and ecological systems at Money Point

and territories beyond. Learning Barge classroom participants will see, firsthand and in an interactive way, what the ordinarily abstract terms “remediation” and “natural processes” mean. The Barge tells of the inextricable link between water and land, as well as the balance between industrialized human activity and the environment. Because the entire shoreline is now privately owned, community members are unable to access the waterfront and enjoy the benefits of living close to the River. The Barge provides a way to be on the Elizabeth and understand the threshold between land and water. After remediation at Money Point is complete, the Barge will be towed to other environmental restoration and conservation projects on the Elizabeth, providing ongoing educational opportunities for the region. In this way, the Barge links the River and territory beyond.

### Making connections over time

The passage of time has been an important consideration throughout this analytical and design process. The geological and urban history of Money Point is rendered visible by layering a series of USGS maps drawn between 1869 and 2001. By tracing the temporal sequence of physical evidence, such as where and when the shipping piers, railways, roads, highways, industrial structures and houses were built, it is easier to understand past, present and future social and economic changes. Once thriving, the residential community at Money Point has been slowly disappearing since construction clearance for elevated I-464 in the 1960's. A shift in the industry/worker relationship due to less labor intensive industries has also influenced this decline. Some residents would like to see Money Point return to its early twentieth-century heyday, but changes at Money Point are connected to physical, economic and social networks in territories far beyond the site boundaries. The desire to “solve problems” at the site level, even if that site is 330 acres, must be considered in light of these larger, nested territories and their histories.

### Academic inquiry and community action

This analysis of the Money Point project makes a secondary argument for the value of linked academic inquiry and community action. The architectural discipline is inextricably linked to the world outside the academy because our work conceptualizes and provides places of

human inhabitation and gathering. This inescapable connection has presented problems in the academic setting, where the diverse and “non-scientific” architectural methodologies have been misunderstood by both the humanities and sciences. Renewed academic interest in community engagement, however, locates architecture’s methods in a more favorable light. By involving faculty and students in “real” projects, the specificity and difference of a place—all places—becomes quickly apparent. Students engaged in actual projects must consider how architecture and urbanism are impacted by political, cultural, economic and linguistic conditions, and how buildings and human settlements affect these conditions. This model of practice, and even teaching, enriches the research of the professor and potentially improves the world beyond.

### Larger research agenda

The Money Point project is positioned within a larger academic research agenda examining polluted and underutilized urban industrial sites. Although heightened environmental awareness has raised their profile, little public or private funding and design effort focuses on the regeneration of these residual sites. If reconceptualized, these socially divisive and often physically marginalized landscapes present opportunities to invigorate negatively impacted adjacent communities, increase physical engagement through urban density, increase public awareness, and support collaboration and design exploration. This essay considers one example of how individual academic scholarship and teaching has been specifically translated into the public realm through a public design process at Money Point. In 2006, this exchange between the academy and community will come full circle in a design/build studio for the Learning Barge, an off-the-grid, interactive environmental education barge and NOAA monitoring station on the Elizabeth.

### Significance

The Money Point project is a model of practice, and a model for the co-existence of waterfront industry and ecological regeneration. By establishing an unlikely civic alliance, generating collaboration between diverse disciplines, and creating a different role for the architect, the project structure benefits the outcome. By employing methods of analysis and design that operate across nested territories and scales while revealing unseen connections over time,

a series of interrelated ideas at various scales emerge. One can understand Money Point within a range of political, economic, social, linguistic, geological, hydrological and climatic networks and material practices. The model of practice and the analytical method employed at Money Point is applicable to other locations, but each project and place is distinct and must be understood within the specificity of the site and inhabitation provided. Practicing in a particular territory requires a knowledge and sensitivity to the place on multiple levels. The Money Point project has connected an academic research agenda with a complex public process that will ultimately generate positive environmental change if all goes well, and perhaps even stimulate new modes of thinking and working for both community-based design practice and the academy.

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### Notes

<sup>i</sup> The Patapsco River in Baltimore and the Anacostia River in Washington, DC also have received this designation by the Chesapeake Bay Program. See the “Chesapeake Bay Tidal Rivers and Chemical Contamination Levels” map at <http://www.chesapeakebay.net>.

<sup>ii</sup> Participating agencies include the Environmental Protection Agency (EPA), the Virginia Department of Environmental Quality (DEQ), the National Oceanic and Atmospheric Agency (NOAA), the US Coast Guard, and the Virginia Institute for Marine Science (VIMS).

<sup>iii</sup> The mission of the Virginia Environmental Endowment is to improve environmental quality by encouraging all sectors to work together to prevent pollution, conserve natural resources, and promote environmental literacy.

<sup>iv</sup> Andrea Kahn has considered the issue of site limitation in her essay, “Overlooking: a look at how we look at site or...site as “discrete object” of desire,” *Drawing/Building/Text: Essays in Architectural Theory* (New York: Princeton Architectural Press, 1991). “While many artists recognize that we are always in the midst of site, formally trained designers prefer to apprehend sites as finite, or fixed. By conceptualizing them as distinct pieces (of land) defined through ownership, design thinking institute a forceful myth: the contained and controllable site.”

<sup>v</sup> See the Elizabeth River Project’s website for numerous scientific reports, references and statistics on environmental change in the River. <http://www.elizabethriver.org>