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A Layered Place: Reuse of Materials in Recoding Public Space

[Cities that exemplify green urbanism are] “cities that strive to achieve a circular rather than a linear metabolism.... Nothing in nature is wasted. Wastes become productive inputs for other natural processes. In hundreds of ways, the same principle could apply to the functioning of cities.... Industries can feed off each other, with each company’s wastes becoming the productive inputs to production processes of the others.”

—Timothy Beatley (2000: 7)

Escalating issues in infrastructure maintenance, redevelopment trends, and human wellbeing are challenging the design professions to produce comprehensive and holistic solutions to these problems. Green infrastructure, densification, and layered programming have been proposed and practised as strategies for maximizing efficiency of construction energy expenditure, lessening development impacts, and creating an engagement with place that fosters well-being (Beatley 2000:

45). These strategies often result in a layered, multi-functional integration of infrastructures, buildings, public spaces, and natural areas. On an urban scale these strategies can be used to both capture new spaces for public use in underutilized or infrastructural areas, and integrate redesigned city functions and infrastructures such as waste and stormwater management into public spaces (Berger 2006: 21). From a design perspective, reuse is developed from a cyclical approach to material, an approach that considers the properties of materials and the processes of demolition and reconstruction as part of the design process (Calkins 2009: 96). As a design and construction methodology, reuse realizes physical sustainability benefits by capturing existing embodied energy from the harvest, deconstruction, and/or adaptation of materials from existing structures. And as reuse entails a partial transformation of a previously designed and manufactured element, it in turn recodes public spaces. This recoding activates a simultaneous recovery of previous design elements rendered fragmentary through demolition or deconstruction and an insertion of these signifying elements into a new design language.

While reutilization and reoccupation of sites is a common result of many urban projects, a design method driven by reuse of materials and places directly connects to temporal and spatial patterns to redevelop urban places. The urban pattern is composed of many layers of constructions exhibiting temporal, spatial, and program-based messages. A continuing increase in complexity and integration of public infrastructure ensures that it will become even more embedded in and then inscribed by the social life of place. With the dual movements of

Fig. 1
Part wellspring, part rubble outcrop, Outfall Two at the Willow Patch emerges from the slope as a trickle of waste water and concrete.
Photo by author.



public space into infrastructural and abandoned areas and infrastructures layered into public space, reuse becomes a key narrative design tool that embodies and displays continual transformation. Potteiger and Purinton define the term landscape narrative as designating “the interplay and mutual relationship that develops between ‘landscape and narrative.’ To begin with, places configure narratives. Landscape not only locates or serves as background setting for stories, but is itself a changing, eventful figure and process that engenders stories” (1998: 5-6) In the narrative of reuse, recoding a single object or system becomes a meeting place of multiple storylines, bridging across spatial and temporal boundaries. Even as function comes to rest in a final (if temporary) form, the old objects still refer to other lives through the process of transformation and by exhibiting past traces of these lives. This reference to other lives is embodied in trace scratches and marks on materials. The scratches, marks, and other characteristics of reused materials form the languages that signify the material as part of both an unknown past narrative, an intermediate narrative of transformation, and a current narrative of present use and social coding.¹

Recoding integrates old signifying structures with new design languages. Construction materials display features, properties, and characteristics that enable an object to be connected to or understood as part of a larger signifying system or code. “A code is a structural system, i.e. a system in which signs reveal a specific paradigmatic, syntagmatic, and analogical architecture” (Danesi and Perron 1999: 92). The paradigmatic quality of a sign refers to how a sign differentiates itself from others; the syntagmatic locates the sign within a larger contexts; and the analogical governs how signs can stand in for others. Materials, with their signifying properties, compose the language of larger semiotic systems.

In architecture, at least three types of semiotic systems can be utilized to understand how the built environment operates: the temporal, the spatial, and the functional. The distinct ways in which repurposed materials relate to multiple semiotic systems can be seen, for example, in how a material exhibits indications of a past use, while also performing a present function. In this multiplicity there is a richness of reference, including mystery and novel functionality that

distinguishes the reused from many new materials. Further, reused materials are distinct from new materials in that in addition to displaying material-specific characteristics, extraction scars and fabrication traces, they arrive with an embedded story from another life of use. These materials will always point to a design narrative that no longer exists. As such, the reused object simultaneously operates within multiple streams of signifying systems. As multiple functions and layered codes continue as standard conditions in dense urbanity, the visual order of the landscape reflects the meeting of different inherited conditions, contemporary design languages and programmatic functions.

This report will trace a material path from demolished sidewalks to new public space infrastructures, drawing upon two collaborative projects in which the author was lead designer of reused concrete landscape elements.² In the Willow Patch and Queens Plaza projects, new stormwater and circulation systems, respectively, integrate proposed, existing, and contiguous systems using materials from the sites’ physical histories. These examples frame the rebuilding of infrastructure as an opportunity to introduce design languages that utilize previously inscribed fragments to connect new functionalities to visual orders of material and history. Just as green infrastructure brings biomimetic functionality and imagery of natural process into urban systems (languages from outside the typical urban spatial context), reused materials exhibit sketched suggestions of the past, from the stain

Fig. 2 (Below)
Layers of infrastructure, constant motion, new construction, and pedestrian life animate Queens Plaza with a level of activity that is all-encompassing. Photo by author.

Fig. 3 (Opposite, top)
On-site processing of waste materials supports a closed materials loop and promotes a vision of urban demolition as resource recovery. Photo by author.

Fig. 4 (Opposite, middle)
Community engagement continually reinvests in the Willow Patch project through planting, harvest, and weaving practices. Photo by author.

Fig. 5 (Opposite, bottom)
The Willow Patch Stormwater Gardens carve and build green infrastructure out of demolished sidewalks from the site’s stormwater catchment area. Photo by author.





of material decomposition to the cracking break of the demolition process. These images, though, are salvaged and composed into practical systems: green infrastructure and reuse both bring a partially uncontrollable image into a controlled and strategic redesign of the city.

The Willow Patch Stormwater Garden

The Willow Patch is a low, wet area adjacent to the downtown of the Central New York community of Cazenovia. The site is bound on all sides by topographic changes, both natural and constructed. Historically, the Willow Patch was used in at least two distinct industrial activities. In the 19th century, the landform was manipulated to create a millpond for local industry. Following this use, the area was either drained or allowed to fill in with sediment, creating a wetland condition that was later used for willow cultivation to supply the Liverpool, New York basket-making industry. Following the decline of the U.S. basket-making, the area was left to succession, though due to the strength of the willow cover, its continued suitability to hydrological conditions and possibly its ad hoc use and maintenance by local weavers, willow still dominates the area. At some point, construction of Cazenovia's sewer system located two stormwater outfalls emerging from the northern upland slope bordering downtown. This condition, as a stormwater-fed wetland, continues today. The Willow Patch Rain Gardens project is an effort to mitigate stormwater impacts while also interpreting the many layers of site history through material narrative and engaged programming.



The Willow Patch project is a recoding of site and material along the trajectories of site history, systems connectivity, and material identity. These three lenses reveal how reuse recodes the Willow Patch site and the town's sidewalk concrete to create a stormwater infrastructural system that is layered with connections to the past and to the town above. The site's identity in industrial and agricultural production provides historical precedent for reconsidering it as a newly industrial and productive site. The new on-site industries include stormwater mitigation and a community-based revival of willow works such as basketry, furniture making, living willow



landscaping and garden accessories, and related training and processing activities. The Willow Patch engages reuse on multiple levels; reconfiguring site layout and access, reuse of the site as community hand-industrial activities, reuse/restoration of productive capacities of willow growing for improved willow production, reuse of site and local materials as infrastructure for access and hydrological modifications for stormwater mitigation. In addition to the productive reuse of the Willow Patch, the design forms begin to realize the site as an “emergent suggestive landscape”: emergent infrastructures, playfully transformative reuse constructions, trace elements showing change and continuity narrative and cultivated/wild interactions. At the Willow Patch, the implemented designs mediate between existing functions, histories, and uses; and new or augmented functions, stories, and engagements with place.

Willow Patch Material History

The history of the site as willow plantation provides narrative and material precedent for reprogramming and restoration of its productive capacity. As the site once served as a place of industry (water power and willow processing), bringing back productive activity to the site (in the form of weaving and furniture making) will layer stories onto these reworked activities. Reuse selects from trace elements of the site’s history to reconfigure materials and uses. As a mediating operation, reuse bridges past and future, conserving some material aspects—industrial material source—yet transforming it to fit with new uses to show what it is doing and how it has changed.

Willow Patch System Connections

The redeployed concrete and willow is configured to improve the Willow Patch site’s function as stormwater-receiving wetland. The site’s history of use as willow plantation and stormwater-collection site suggests an idea of the site as permeable container, much like a woven willow basket. The warp and weft of the wetland container is formed by berms, weirs, and rows of willow. These detain flow and encourage the uptake of stormwater, much like a filter box or



woven basket would hold saturated soils and slowly release water.³ The reuse of sidewalk concrete (from the replacement of sidewalks in the catchment area) to construct weirs and outfall protection cascades builds a connection between the patch and the source of runoff. The stormwater control devices are built to align with extensions of the town’s grid form, creating an impression of an infrastructure that emerges from the town above. Additionally, this source connectivity aligns with the interpretive goal of the project, to demonstrate the potential to redefine waste material (stormwater and rubble) as newly productive elements in restorative design.

Willow Patch Material Narrative

The reuse of Cazenovia’s demolished sidewalk concrete in the Willow Patch’s stormwater control structures demonstrates a strategy of material repurposing. As the alignment of berms and weirs makes a connection with the town above, the material retains its identity as former sidewalk to interpret the relationship between the Patch and the town. Redeployment of sidewalk concrete as dry laid weirs and energy dissipation cascades encourages a contextual understanding of materials. Here, as in the sidewalk function, concrete is used for its property of hardness. But in the Patch the configuration is arranged to retain water yet be permeable, like a filter or the woven basket. This contextual redefinition aligns

Fig. 6
Piles of broken sidewalks staged in the Willow Patch await reconstruction into weir follies. Photo by author.



Fig. 7
Demolished grey infrastructure is inverted and reused as stormwater detention weirs. Photo by author.

with reuse's transformation of waste materials into newly re-valued building materials.

The reuse shows that sidewalk concrete exists within a cycle of materials that may be circulated many times. A continuous rebuilding with already inscribed materials facilitates a layered narrative in which multiple times and spaces coexist to tell open-ended and user-activated stories:

Spatial narratives are silent but persistent. With few protocols for reading a landscape from right to left or front to back, the viewer enters at different points, is free to pause, take in the whole image, inspect its parts, or review. This changes the traditional relationship between author, text, and reader where the author exerts control over the telling. Instead, the spatial narrative is more about showing, relinquishing control to the viewer/reader who must put together sequences, fill in the gaps, and decipher the meaning. And since most landscapes are shaped by environmental and

cultural process, they do not have an author or a narrator. In turn the viewer must find the stories and become the narrator. (Potteiger and Purinton, 1998: 10)

The specific configurations of reused sidewalk concrete explore the material in three distinct arrangements that trace the path from sidewalk to stormwater feature. A weir of stacked whole sidewalk slabs recalls the flat condition of the sidewalk while also appearing most clearly as an extension or bewildering appearance of pedestrian infrastructure in a wetland area. The inverted slab prominently displays the broken edge, retaining a memory of demolition while utilizing the roughness for energy dissipation of stormwater flows. The third weir folly is composed of a group of whole standing slabs, arranged casually as if engaged in a conversation while a trickle of water flows through. As a set of poetic devices, the three conditions combine as a narrative of demolition/reuse process and as a schematic of the transformation of demolished grey (concrete) infrastructure into structural components of new green infrastructure (stormwater management that mimics natural processes).

Queens Plaza Reused Concrete Medians

The Queens Plaza Bicycle and Pedestrian Improvement Project is located in Long Island City (Queens), New York, at the eastern base of the Queensborough Bridge. One of the project's goals is to improve vehicular, bicycle, and pedestrian circulation flows and coordination in a very busy corridor known for a history of conflicts among the transportation modes. The project is a pilot for New York City's High Performance Infrastructure Guidelines, key goals of which are promotion of human health and safety, environmental quality, sustainable construction, and waste reduction (New York City Department of Design and Construction 9). The portion of the project that features reused concrete medians shows the potential for green infrastructure to display its radical shift in thinking about energy and material flows through the city. The reuse of sidewalks is informed by the three sets of codes at work in urban site reuse. The reuse of site and material reveals the site as a continual flow of materials, strengthens its connectivity to existing

and new systems, and repurposes materials to create a story embedded in materials. These three engagements visualize an existing urban language of horizontal, continuous, and expansive pavements, which is then substantively recoded through inversion, breakage, and gathering.

Queens Plaza Material History

Since the city is in a constant state of repaving, the project serves as research into and demonstration of the quarrying of the city. This quarrying takes an extractive attitude toward the built environment that has usually been reserved for nature. Willfully dismantling the city to reuse its parts demonstrates a changed attitude toward waste and an acceptance of the cyclical process of unbuilding to rebuild. The metaphor of quarrying is carried through to design as an outcrop of urban geology. Much as Tear Drop Park in Battery Park City appears to connect to bedrock through an emergence of Taconic stone, the reused concrete medians at Queens Plaza celebrate the hard structure of New York's contemporary anthropo-geology. As Steen Høyer points out,

The surface as bearer of elements is the key strategic field on which landscapes may be organized and designed. It is on the surface that objects and spaces are crystallized in relationship to the surrounding forces of the place ... but inspiration still is drawn from the ground below the surface: from the geology, the light, the history, the depths of place and time. (Høyer 1999: 75)

But in marked contrast to the use of new materials, design with urban sourcing creates a recoding of the city: it promotes a vision and evaluation of existing strata and formations of architecture and infrastructure for its potential salvage value. It is the inversion of formerly lying sidewalk slabs that recodes the material and its usage. The vision is no longer of broken concrete as waste material, but rather of an urban material resource stockpile (as it is being used in one lifetime) patiently waiting for an inversion into its next life.

Queens Plaza Systems Connections

The design and building practices that inform reuse constructions are both conservative and



transformative. The process evaluates properties and characteristics that could continue to serve a purpose in new design. The degree and character of modification and reprocessing differ across the spectra of unique local conditions. In both material and site reuse, a sensitive and strategic deployment of construction energy guides form into new functional relationships within the existing city fabric and proposed design. The redeployment of reused sidewalks as pedestrian traffic flow devices is an example of a multi-functional infrastructural landscape. While it performs the function of traffic direction, it also supports the safety of pedestrians, demonstrates redesign with “quarried” urban materials, improves wayfinding, and creates gateway visual interest. The surprising accidents of demolition,

Fig. 8 (Top)
The Queens Plaza site during construction, showing the spaces leftover from roadway realignment. Image courtesy of New York City Department of City Planning.

Fig. 9 (Bottom)
Details from another life—inherited marks combine with irregular breaks to add another layer of imagery to the urban collage. Photo by author.



Fig. 10
Mysterious details suggest the past and encourage imaginative narratives. Photo by author.

breakage, and revealed interior aggregates reflect the “opening” of the urban surface. A poetics of concrete, the revealed insides show a pattern of aggregates (gravel) bound together by the once liquid cement mixture. Fluid, then solid, broken, then repurposed—the lifecycle of concrete is long—its durability and reusability carry the potential to be long-lived recording devices.

Queens Plaza Material Narrative

Concrete is the ubiquitous urban material and its standardization and homogeneity is essential for cheap, durable, and accessible sidewalks. But at the end of its life, in demolition, it is revealed to be as unique and varied as stone. The sidewalk’s breakage produces a new irregular edge and shows its insides to be a varied pattern of diverse aggregates within a matrix of cement-based binder. Reconsidering the sidewalk, in both a repurposed functionality and as an unexplored texture, the Queens Plaza reused concrete medians take apart the familiar urban ground. In demolition, inversion and arrangement, the slabs create a *gathering of stones*, an urban mass of similar but distinct pieces. The design and documentation evolved around the acceptance and advantageous use of the unplanned (break) and standard (width of material). This relationship between randomness of broken edge and the regular pattern of rows of material recalls the sedimentation, uplift and shear of a geological

outcrop. The irregular and the ordered become a poetics that suggests complex relationships such as individual/society, natural/constructed, and broken/useful. In a discussion that could apply to urban practices, both in form and process, Terry Eagleton states,

What mediates between difference and identity is structure – the way differences are articulated into a significant pattern, as in narrative. But if that sense of articulation fails, if there is no longer a system, then it becomes difficult to say whether we are living in a world in which everything is dramatically different or increasingly identical. (2000: 73)

If the homogeneous expanses of grey infrastructure become an outmoded form of stormwater management, and green infrastructure is increasingly inserted into the infrastructural system as a practice of capturing and reusing rain water as a resource (much as reuse captures demolition waste), the resultant landscape opens a visual disruption that both practically and visually weaves back into existing conveyance and circulation systems. As a gesture of upheaval, the gathered rows of inverted sidewalks as anthropogenic outcroppings describe the green infrastructure goal of opening the urban pavement to rain and, further, opening the homogeneous expanse to multiple, layered use and expression. For reuse in permeable constructions pursues green infrastructure’s biomimetic principles by treating the demolition and construction sequence as a closed loop system and by attempting to apply the characteristics of some natural systems (water absorption, filtration, and infiltration) to human made landscapes.

Recoding the Familiar with Reused Materials

Reuse recodes places and materials as it builds upon and transforms existing features without completely obliterating all of the visual traces that reveal a previous history. As such, reuse breaks with the dualism of old/new by synthesizing properties, potential uses and lost signs embedded in materials into new design. Beyond the fairly straightforward sustainability benefits of reuse, “suggestively reused” materials imply past stories of peoples’ interactions with places. Suggestive reuse activates an open set of oblique markings,

allowing the active and creative imagination to reinvent and dream personal narratives. Suggestivity and obliqueness are key characteristics of found materials that form a reading of landscape that simultaneously validates multiple and overlapping layers of meaning.

Additionally, reused materials often reveal indices (like scratches and scars) that chart or map processes of change and transformation. Suggestive reuse cannot ever be fully subsumed in a preservation landscape or into new construction. The material relations of reused places and materials do not seek to restore a previous condition of functionality or to create entirely new relations. In this way, suggestive reuse eschews a finished product as it becomes a visual description or schematic of transformative process itself. As a transitional and transformative construction, it emphasizes the cyclical nature of growth and change. In this scenario, the user can create independent and diverse narratives from the poetics of partiality, of incompleteness, rawness, pastiche, and juxtaposition. Just as reprocessing salvage opens the urban form to distinct past voices and brings additional value to materials by alteration and reprocessing, the reuse method attempts to create more social value in the construction process. This value is generated through conserving and reincorporating materials that create narrative continuity and commentary within redevelopment changes.

The Reuse Leap

A leap is made in reuse. This leap is set up by an incongruous situation. What is perceived does not immediately make sense. A material looks to be out of place because some of its marks, or its shapes, do not look to be performing any function or to be contributing parts of the object's design language. Many of its attributes or characteristics may seem to be non-functional or unrelated. This confusion may have several causes: the function of this object is unknown to the perceiver, or the object exhibits an aesthetic so unknown to the perceiver that it goes unperceived as design, or the markings and shapes of the object are residual from a previous use. Whatever the cause, interpretation of the environment begins with this unclear situation. Beyond turning right or left, interpretation in a broader sense is the meaning-generating activity that engages people with the environment.

Interpretation derives from the need to "make sense" of the environment and there are various modes of doing so. One is determined by the utilitarian concerns of learning how to navigate or use objects or spaces. The other is more properly interpretive, as it seeks to understand, appreciate, or otherwise feel the ways in which the landscape may mean something. This interpretation is a way to "locate" the landscape within the interconnected trajectories of time, space, and society. Formation and connection narratives explain



Fig. 11
Urban nature and anthropogenic outcrops of broken concrete rise from beneath the overhead rail lines. Photo by author.

(however fancifully) how a landscape came to be and how it relates to contingencies in both space and time. Suggestive interpretive design (as opposed to didactic interpretive design) engages the projective imagination. It imagines the connections to, and formation narratives for, scenes that are impossible to reconstruct and that do not yet, and may never, exist. In Queens Plaza, the reused concrete as anthropogenic outcrop suggests a narrative in which construction debris upon which much of New York City is built is revealed. The reuse landscape is fundamentally an interpretive landscape because it redefines objects and materials by creating gaps between functionalities, fanciful recodings, and imagined histories. The reuse is a disruption and a disturbance in the relations of an object. It creates a gap between an object's formation and its present appearance, between an object's location and those things adjacent to it, and between how the object may have been used or understood by people and how it may be used and understood currently.

This process of interpretation is fluid and open-ended—the story perceived is a story created. It might be as much an autobiography of the perceiver as a narrative reconstruction of the formation of a particular landscape. To some extent the perceived landscape (as opposed to the used landscape) may be more like a work of art. No matter how specifically embedded with information, it will be an open container or partially erased slate for the projections of its perceivers. The landscape of use may be slightly different from the landscape of image or linguistic code, as its interpretation is related to finding the ways to use it, navigate it or otherwise interact with it in a functional relationship. Misuse, alternative use, reuse, or any type of unplanned use, may be corollaries to the “open” interpretive landscape—a creative engagement whose outcome is unscripted and unknown.

Reuse Codes

Parallel to the dynamic system of construction, use, and deconstruction of physical structures is the system of codes that is embedded in, and projected out from, the designed world. As a place has intense relevance and use for a period of time after its construction when its planned program

tightly corresponds to user needs, the signs and markings on objects are also directly related to the community that created them. Over time, spaces and objects can become disassociated from the core group that created, used, and maintained them, creating a condition of underutilization or abandonment. Yet, the space and the marks remain, and, when they are redeveloped, these indices of past lives can either be erased or incorporated into a new design. An indicator of palimpsest, reused materials mark change by pointing back to a previous design language and to the people who created and understood that language. For example, the perceiver may not know what made certain markings, what they were for, or why they remain in the perceived object. These markings may appear to have no apparent purpose, aesthetic, functional, or otherwise (e.g., indexical). The materials and spaces (and the leftover marks that accompany them) are ripe for both functional repurposing and meaningful reinscription by designers and users. Then, the perceiver is left to seek imaginative interactions with and interpretations of mysterious marks and even misleading signs.

Perceived indirectness, low value, difficulty in narrative control, and abjection of materials (their perception as waste) also opens an opportunity for designers and users. Low value and reference to lost constructions provide a basis for suggestive design expression. Reused materials are tainted by the discrimination against waste, but design engages these status narratives by recombination and reconstruction that alter their real and perceived sense of value. Redefining waste materials through strategies of adaptation, modification, incorporation, and redefinition overwrites the waste narrative with use value and visible stories of transformation.⁴

Layering in the landscape takes on multiple codes in one situation. One or more sets of indices are residual from previous actions of fabrication, installation, and use. The relationships between the coded languages of the different sets of markings open the landscape up to a multiplicity of readings and understandings. This opening encourages the public imagination to create non-linear narratives, to begin to see public space as a common authorless realm, and to begin to realize the political potential of design. Since the



Fig. 12
The functional reuse of waste concrete captures and creates value, while also animating the narrative by exposing marks from previous use and demolition. Photo by author.

indices point to a function, cause, or use that is no longer in existence, the user must use imagination to complete the imbalanced situation with an invented narrative. Imaginative completion by the user is a key to the engaged and unfinished landscape, as the broken narrative requires the participant to become an author or interlocutor. Geographer David Harvey comments on the potential of this kind of individual, localized meaning within the larger social structure:

The particular spaces of the city are created by myriad actions, all of which bear the stamp of human intent. Answering Foucault, de Certeau sees a daily substitution “for the technological system of a coherent and totalizing space” by a “pedestrian rhetoric” of trajectories that have “a mythical structure” understood as “a story jerry-built out of elements taken from common sayings, an allusive and fragmentary story whose gaps mesh with the social practices it symbolizes.” (Harvey 1990: 214)

At all scales, from larger urban form to detailed material, situations are in fact “incomplete” and fragmentary, requiring some imaginative facility to render a story of the scene. The “sense” of the

landscape—to the extent that it can tell or portray a story, its own story of formation or development included—rests in the user, and thus is a fiction borne out of partial information, developing understandings of physical processes, imaginative projection, desire, and fantasy.⁵ While Harvey may suggest that all public spaces contain these gaps and openings for pedestrian narratives, the reuse landscape embodies a designed engagement with the complex layering of meanings across space and time. This type of design with reuse embraces an incompleteness of process that encourages individualized interpretations that do resist “the technological system of a coherent and totalizing space.”

The reuse approach, from site to material, provides a framework for expanding the understanding of future functional value when determining significant parts of existing landscapes. According to typical calculations, it is more cost effective to dispose of the material than it is to reuse it. Alternative metrics, though, that incorporate pollution penalties and cultural significance could transform the economies of

reused materials. In the transformation of existing landscapes to newly productive and useful spaces, the redefinition of the repurposed material forms a third language, between old and new, that can be termed transformational. This transformational aesthetic, in that it remains between previous and potential, becomes an open narrative that portrays origins, current processes, and future existence. Sebastien Marot discusses the role of time in the aesthetic of public sites:

By bringing the effects of time back to life and appearance, the designer may both restore and prepare sites for often unforeseeable futures. Thus, there is also invoked an attitude of incompleteness; rather than building a final solution, seeds are sown, questions raised, and potential structured. (Marot 1999: 51)

In both function and recoded language, the reuse material demonstrates a process of adaptation that is conservative of useful properties, sensitive to context and imaginatively provocative. Reuse, in practice, and potentially in the narratives that it helps compose, forms spatial and temporal connections from outmoded and single use infrastructural and park areas to the complex, layered landscape of the densifying urban fabric.

Fig. 13
The reuse of sidewalk concrete opens the fabric of urban space and time by inversion and by retaining the cracks of demolition. Photo by author.

Conclusion

The Willow Patch and Queens Plaza projects exemplify the transformation of landscapes using the reuse method. At the Willow Patch,

a remnant “waste” wetland receiving stormwater is reconfigured and reinscribed with reused materials to show how landscape can recode waste materials and places. Through constructive redefinition, both waste materials and “waste” landscapes (the wetland) are recoded as bridging elements between systems. In Queens Plaza, underutilized spaces are reconfigured as part of a pedestrian safety redesign while also forming a gateway landscape that creates a striking poetics for the new green infrastructure. Both the Willow Patch and Queens Plaza examples show how change can be accomplished through site recovery, material redeployment, and narratives of continuity within change.

As materials and sites can be reconstructed for new functions, their interpretive recoding also begins to construct an imaginative narrative around the history of the site and its transformation. Addressing the problems of infrastructural upkeep and human wellness is a critical challenge for public space designers. Reuse depends upon a development pattern of densification, where previously used places and materials are reconfigured and meaningfully re-inscribed. In densification, layering and coordination of programming is reflected in a multiplicity of coded languages formed by and found in the different expressions of use. With a selection of materials and sites to be reused by criteria of both functional value and interpretive possibility, the reused can physically and semiotically form the bridge between past and present landscapes. In sensitive redevelopment, traces of past lives found on materials feed into new narratives that both actively live in the present and retain a rich suggestion of the past.

The folly weirs emerging in the Willow Patch and the inverted crowd of sidewalk concrete at Queens Plaza demonstrate how materials can be substantially recoded in green infrastructure projects, rewriting value narratives by bearing along lost meanings within new functionalities. It is this recovery of the lost voice in materials that aligns reuse with new green infrastructure. For as green infrastructure arrives in the urban situation as a conversation between engineering and natural process, reuse also emerges as a dialogue between voices of current design and traces of the past.



Notes

1. See Potteiger and Purinton for a full discussion of design and narrative.
2. The Willow Patch Stormwater Garden project in Cazenovia, NY, was initiated by Professor Matthew Potteiger of the State University of New York—College of Environmental Science and Forestry, on a site owned by the Cazenovia Preservation Foundation. The collaborative team involved students and professors from SUNY's Landscape Architecture and Forest Engineering Departments, as well as student and teacher volunteers from Cazenovia High School and Cazenovia College. The Town's Public Works Department donated labour and materials to the project. Don Ferlow, FASLA, performed the wetland delineation and design reviews. Ecologic, LLC, supplied water testing. I was a member of the design/planning team mentioned above, and was then hired by the Cazenovia Preservation Foundation, using a grant from the Central New York Community Foundation, to complete design and construction documentation, compose the Wetland Impact Notification to the Army Corps of Engineers, and to direct field placement of materials and direct other construction activities. The Queens Plaza Bicycle and Pedestrian Improvement Project's team included Margie Ruddick, Landscape Designer with WRT Design, Landscape Architects; Marpillero Pollak Architects, Urban Design; Langan Engineering, Engineers; Michael Singer, Artist. In consultation with Margie Ruddick, I was lead designer, documenter, and specifications writer for the reused concrete portions of the project. Construction Administration was performed by the site engineer and the local landscape architectural consultant. For extensive imagery and further project descriptions see: www.flickr.com/photos/tobiahhorton/sets/72157603194009082/ (Willow Patch) and www.flickr.com/photos/tobiahhorton/sets/72157625528666819/ (Queens Plaza).
3. For more explanation of the landscape as filter for stormwater see Hough (1995: 73).
4. Industrial ecosystem thinking that seeks to exploit byproducts, coproducts, and wastes can be applied to the design, demolition, and construction industries. Though a challenge, working across disciplines will be necessary to create a more closed loop system of design, demolition, and construction. See Allenby and Richards (1994: 6,8).
5. See Eco (1989: 4) for interesting, if largely unintended, corollary between the design and construction sequence and the composition and performance of musical pieces.

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