



Fresh Kills site; an aerial view, looking north.

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# Environmental and Community Health: A Reciprocal Relationship

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The rehabilitation of brownfield sites to productive landscapes — whether for development, public open space, or mixed uses — is by its very nature an environmental health undertaking. Contaminant remediation and the creation of cleaner, productive environments on these marginal sites have potential to dramatically enhance the quality of life for some of the neediest, most vulnerable communities. The notion of “Restorative Commons”, as articulated by Meristem’s Executive Director Anne Wiesen, is one of public landscapes conducive to individual and community health, as well as to lifestyle practices and civic relationships that engage, renew, and sustain such spaces. They are also places and resources to which the public has free and open access. If redeveloped in this way, brownfield projects can strengthen our understanding and respect for the natural environment, heightening our sense of connection to and eventually making us more aware of the interdependence of the human and nonhuman worlds.

Many contributors to the Restorative Commons Forum demonstrated the importance of nature on human well-being and described ways in which this is manifested in people’s lives. Ecological and social systems should reflect an active reciprocity between the state of the natural environment and human communities. In brownfield reclamation, I suggest that these benefits come not just from the renewed environment but also from the renewing process itself: there is

a profound and reciprocal relationship between the healing of a natural environment and those enacting it. This is likely on most brownfield projects, but the benefits are most salient where a community is the catalyst for — or has substantive involvement in — the redevelopment. A project such as the making of Fresh Kills Park presents an opportunity to consider how this might happen in complex ways and at a great scale.

### **From Landfill to Park**

Fresh Kills was, until March 2001, the world's largest active municipal waste disposal site, known derisively as "The Dump" by Staten Islanders who, over its four decades of existence, became stigmatized by its presence and revolted by its sight and smell. Eventually, Staten Islanders organized to force the retrofitting of the site with technologically advanced environmental control systems, and finally, the landfill's closure. The former left a "clean" but manufactured landscape of monumental engineering complexity. The impending closure led the City eventually to develop a master plan and conceptual designs for the site's end use after land-filling. At the start of planning it was by no means a certainty that Fresh Kills would become a park, although environmental as well as technical factors made this likely. Its awesome scale and rolling topography, stunning wetlands and creeks, and the sight and sounds of abundant birdlife, made the possibility of a park almost indisputable. Even in its incipient state, the power of resurgent nature expressed in floral recolonization, coupled with a surprising quietude, created a sense of refuge within the city. Further, public testimonial of the sanitation workers over many years, and consultations with policy-makers, designers, and residents during initial reconnaissance visits, revealed longstanding visions of this site as Fresh Kills "Park". Encounter with these was among the most compelling factors in the decision taken to create in this uniquely "urban-pastoral" landscape a public park, despite the challenges, and commensurate with the opportunities of the site's constructed and natural history.

The proposed new park will be almost three times the size of Central Park, comprising four vast waste mounds set within an estuarine landscape of creeks, tidal wetlands, low-lying meadows, and upland forested areas. If successful, Fresh Kills Park promises to be as significant to New York City and the practice of landscape design — and

public health — in the 21st century as **Central Park** was in the 19th and 20th centuries. The Park master plan began in 2001 with the selection of a consultant team, led by James Corner/Field Operations, through an international design competition that included, even in this early phase, substantive community input to the design brief. Field Operations' winning proposal, *lifescape*, envisioned Fresh Kills Park as “a new form of public ecological landscape; a new paradigm of creativity and adaptive reuse. *lifescape* was to be informed by the voice of an engaged public and shaped by time and process.” The Field Operations team imagined an ecologically robust landscape, not as a pastoral refuge from the city, but as an active agent within it. Fresh Kills would provide richly diverse settings for wildlife, contribute to urban air quality and efficient water management, and function as a vibrant locus for social life: for active recreation and for physical and cultural experiences. Because the site is vast and complex, the idea of a landscape that would develop in stages, unfolding over time — as all life does — was central to the competition proposal and remains at the core of both the draft master plan and early designs for Fresh Kills Park. Thus, from the very beginning, the Fresh Kills Park conception embraced design ambitions and strategies that are clearly, and broadly, health-promoting with exceptional opportunities for Restorative Commons, for accommodating the functions — social and biological — that we at the Forum worked to define and understand.

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**Judith Heerwagen**, another participant in this Forum, described specific qualities of nature, and our interactions with nature, that promote a sense of well-being. Some qualities, like those of sunlight and shade or the proximity of water, are elements in the landscape itself. Other benefits are generated by our actions in the landscape, a product of landscape's “transformability” through interactions such as gardening and plant propagation; the potential for play; or the reordering of the landscape and elements within it. Many of these attributes are vital to Fresh Kills Park and its evolution into a refuge not *from* the city, but *within* the city. Quoting from one of the master plan documents, “This *lifescape* would be created through human agency — through design and adaptive engineering, through planning and government investment, and through the participation of its future users. Sports, learning, performance, and cultural events, neighborhood revitalization, and art would all take their place alongside the micro- and macroscopic ecological processes.”

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Hilltop view, looking north  
across William T. Davis  
Wildlife Refuge toward  
Lower Manhattan.

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...not as a pastoral refuge from the city,  
but as an active agent within it.





Aerial montage of  
the proposed Fresh Kills  
Park by the designers,  
Field Operations.

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## **Extensive community input was solicited over 18 months. The plan reflects many of the stated needs and desires of the community:**

- Keep the site passive and natural
- Retain the large scale open spaces
- Paths and trails for long walks, cycle rides, and horses
- Access to the water is important
- Limit commercial activities to the core of the site
- Sports and recreation facilities are desirable
- Demonstrate renewable energy
- Demonstrate ecological techniques of land reclamation

## The Fresh Kills Park Mission:

- Transform 2,200 acres of landfill to park
- Create a new public park of unprecedented size
- Restore the health of 2,200 acres of public land
- Establish living laboratory for sustainable land practices and infrastructure
- Embody the principles of PlaNYC [Mayor Michael Bloomberg's long-term sustainability plan for New York City] on one site
- Keep a promise to the people of Staten Island

## The Master Plan

Several goals and strategies of the Fresh Kills Park draft master plan are especially representative of what Restorative Commons should be and warrant close observation over time: the techniques used to revitalize and diversify its wondrous estuarine landscape over many years; revegetation of the landfill mounds to create diverse, native habitats; recreational programming, passive and active, geared to evolving community needs; the degree of, and inventive strategies employed to engage and empower the local and regional community in the site's development; the site's integration into the surrounding natural, human, civic, and infrastructural ecology; and the engineering innovations that will facilitate end use that could have widespread application.

Among the more notable of these efforts, because it will establish the Park's ecological foundation while also presenting remarkable opportunities to make the site's transformation visible, is the mammoth task of soil amendment and manufacture. The draft habitat plan called for a combination of soil strategies: amendment of existing soils, purchase or manufacture of new soils, adjustment of the soil specifications for new cover on the landfill mounds still under-going final closure, even "industrial scale" crop rotation. The latter proposal, successful in Midwest prairie reclamations, turned out to be ill-suited for creation of soils needed by our native plant population; nonetheless it illustrates how keenly the design and planning team understood the fundamental importance of public engagement and how natural processes can uniquely facilitate that engagement: the alternating rows of diverse and colorful crops would have been vividly apparent when seen from adjoining communities and roadways. Quoting again from plan documents:

"...design as choreography of stages in time... rather than the making of space or place in the traditional sense, is particularly appropriate at Fresh Kills... Especially in a landfill, understanding the stages and processes of transformation is an important public value... The landscape will be 'legible' if the processes of its making are visible, if its appearance carries information about its substance, and if each stage in its transformation is inhabited, understood and enjoyed."

Another example of involving, inhabiting, and reading this changing landscape is the expansion of the city's Native Plant Center at a location adjoining the site and within the adjoining Travis neighborhood. Here many seeds of local origin are being propagated for planting the site, while additional propagation is taking place on site in what is called the "Founder Seed Program." The inclusion of local residents and others from around New York, in this essential act of nature, from seed propagation to sowing of seeds or planting of saplings, also is planned. The use of local seed stock and native plant communities builds on and integrates the site into the surrounding natural ecology.

Fresh Kills Park, in fact, adjoins the existing William T. Davis Wildlife Refuge and will provide the vital, last link in the 3000-acre Staten Island Greenbelt. Given the scale of this effort the project's strategies and outcomes could have global influence on land reclamation, and given its particular location, at the center of the northeastern megalopolis and along the Atlantic migratory flyway, Fresh Kills should provide far-reaching ecological benefits. The plan also calls for — and the Department of Parks and Recreation is now designing into the first projects — sustainable practices for water management, energy production, and energy use. In fact, methane gas at Fresh Kills, a byproduct of landfill refuse decomposition, has long been cleaned and converted to pipeline quality gas for domestic use. This and other onsite environmental quality control systems will figure in an extensive educational program proposed for the Park.

The central focus on nature and environmental education, passive recreation, and wildlife interpretation at Fresh Kills came directly from the surrounding community and was somewhat surprising given the emphasis on active and competitive sports among Staten Islanders. It was apparent very early in the planning outreach that the local community also felt the unique nature of the site and a need to respond to and learn from it. Fresh Kills Park programming will, nonetheless, be quite diverse, addressing the community's broader needs and taking advantage of the site's particular opportunities. This will include extensive active recreation — such as mountain biking, cultural programming, and public art. The landfill has long had a resident public artist, Mierle Laderman Ukeles, who was on the planning team and championed the need for art and architecture. The Park also will offer



Rendering of proposed  
recreational use:  
bird observation tower.  
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Renderings of proposed recreational uses: mountain biking, canoeing and kayaking, soccer fields, and riding trail.

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programming to foster an understanding of waste management as integral to our urban ecology. A park drive, important to site circulation, also was proposed to provide a new east-west link between major arterial roadways, a need long viewed by the community as essential.

Eloise Hirsh, the Fresh Kills Park Administrator for the NYC Department of Parks and Recreation, has said Fresh Kills must be “a model of 21st century infrastructure as well as park development and creation, at the cutting edge of sustainable design; a beautiful park evolving through a very public process.” At the same time, she has asked a question that I believe is critical to the making of Restorative Commons, to the building of public parks that optimize community and ecological health: “How do we manage public expectations and inform people of the challenges as well as the opportunities?” I’ve tried to show through the example of Fresh Kills Park how these opportunities and challenges might be met: for it is integral to the conception, and ultimately, I believe, to the success of Fresh Kills that the human-made environment and natural systems, human and nonhuman habitats, be understood as a single living, experiential continuum. In the words of David Abram, environmental philosopher:

There is an intimate reciprocity to the senses; as we touch the bark of a tree, we feel the tree touching us; as we lend our ears to the local sounds and ally our nose to the seasonal scents, the terrain gradually tunes us in turn. The senses, that is, are the primary way that the earth has of informing our thoughts and of guiding our actions. Huge centralized programs, global initiatives, and other “top down” solutions will never suffice to restore and protect the health of the earth. For it is only at the scale of our direct, sensory interactions with the land around us that we can appropriately notice and respond to the immediate needs of the living world.

*From The Spell of the Sensuous (Abram 1997)*

The transformation of Fresh Kills will be a literal ground of reciprocity, embodying in its plan and design processes the direct action and interactions of this hopeful vision. In how many ways might we and the environment converse at Fresh Kills and, in so doing, come to a greater understanding of the “encompassing earth” and the impact of our actions within it? At Fresh Kills we have senselessly and severely

damaged a previously vital and beautiful ecosystem. But we also have returned, largely through the volition of local communities, to heal that land. This very human impulse to heal seems to me at the core of Restorative Commons, both as a means and end, particularly when the means involve active collaboration of community, policy-makers, planning, and design professionals with, most reassuringly, the land and the air themselves. In so doing we reveal nature's power, our power, to restore health and to take greatest pleasure in our public open spaces.

### **Literature Cited**

Abram, David. 1997. *The Spell of the sensuous: perception and language in a more-than-human world*. New York: Vintage Books. 352 p.