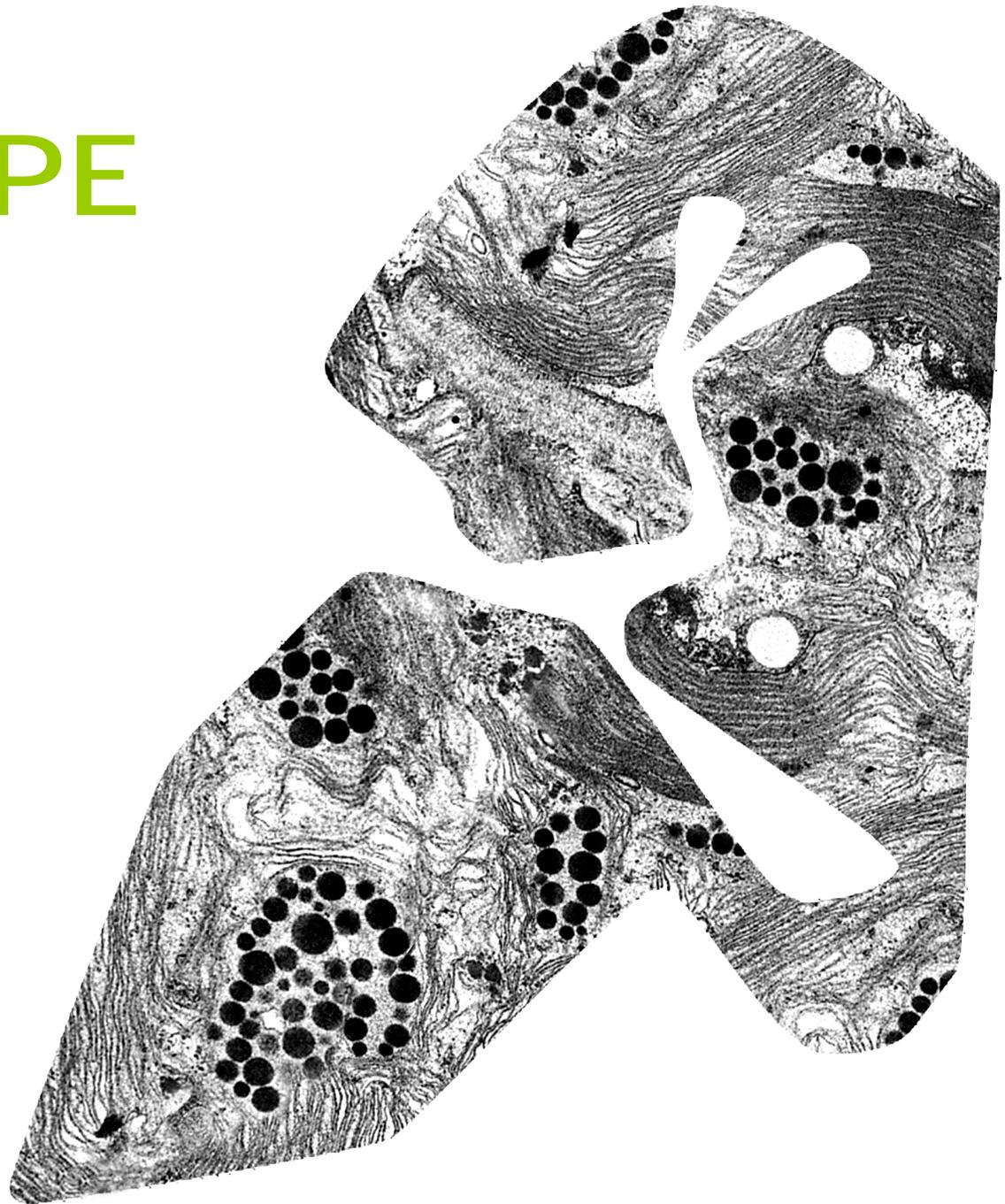


# LIFESCAPE

FRESH KILLS RESERVE  
STATEN ISLAND, NEW YORK



field operations

# LIFESCAPE

## FRESH KILLS LANDSFILL TO LANDSCAPE DESIGN COMPETITION STATEN ISLAND, NEW YORK

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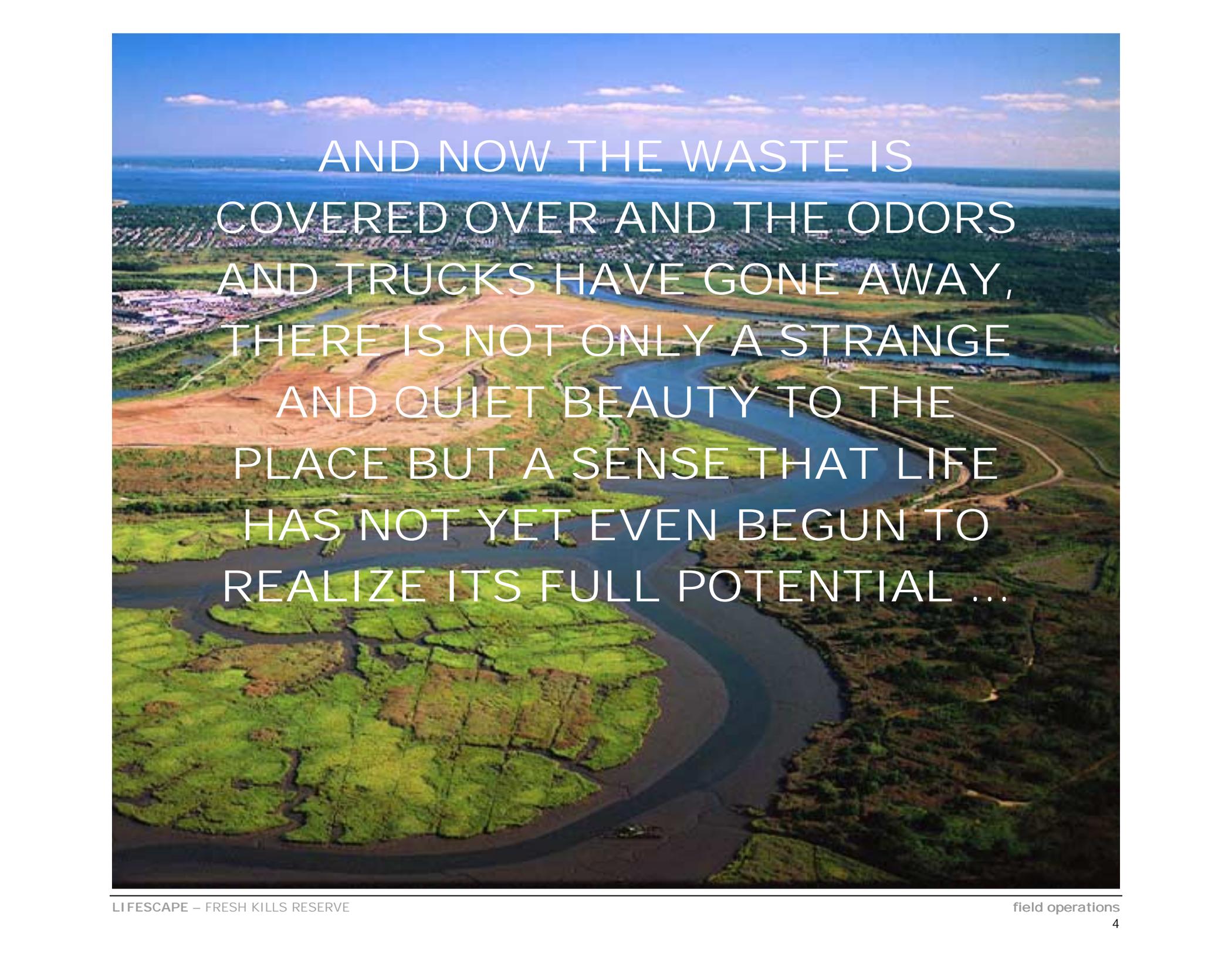




EVEN AMONGST 150  
MILLION TONS OF HUMAN  
WASTE AND TRASH

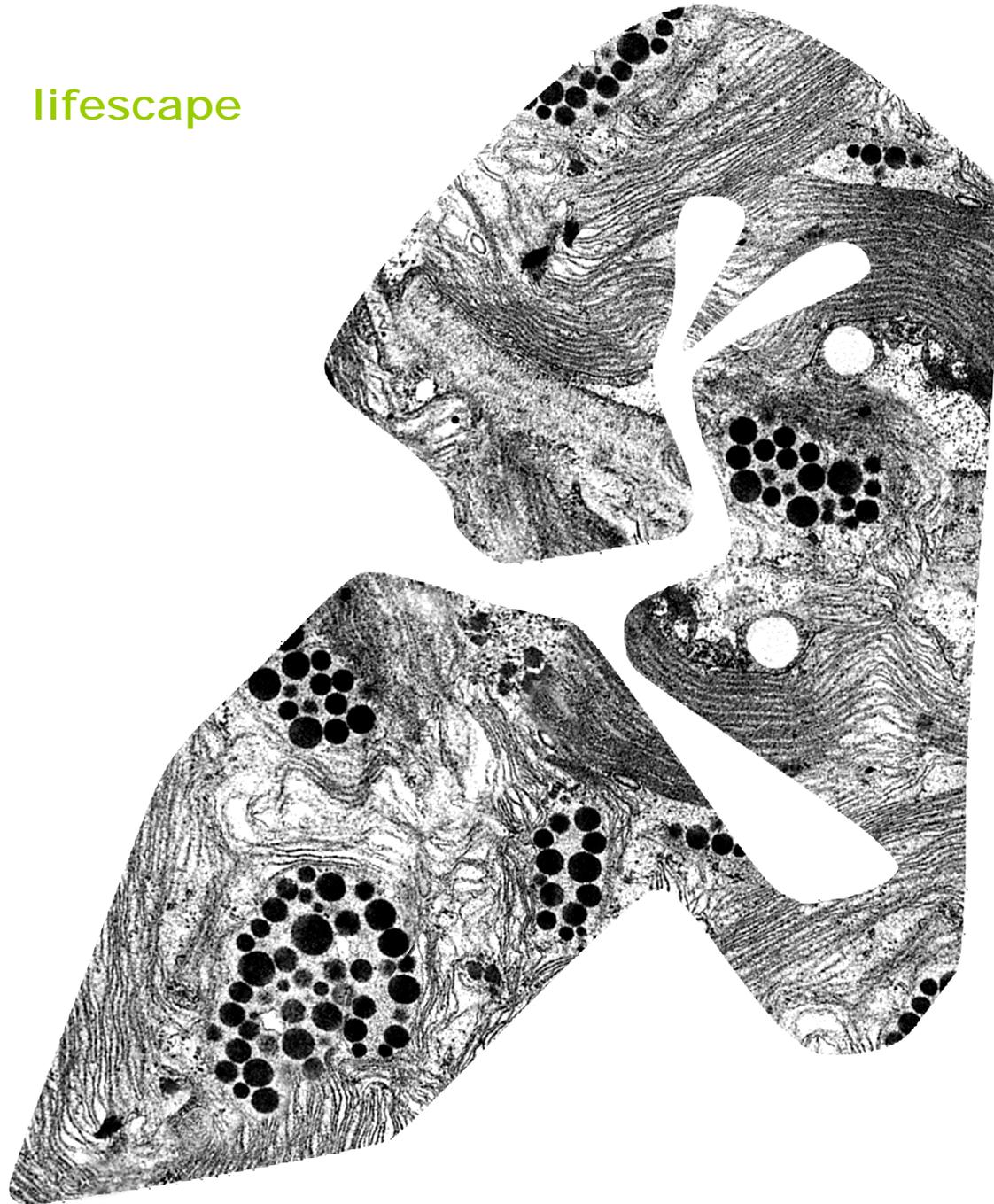


LIFE PERSISTS

An aerial photograph of a river winding through a landscape. In the background, there is a large body of water under a blue sky with scattered clouds. The middle ground shows a mix of green fields and a large, reddish-brown area that appears to be a former construction site or a cleared area. The foreground features a marshy area with green vegetation and a small island in the river. The text is overlaid in white, centered on the image.

AND NOW THE WASTE IS  
COVERED OVER AND THE ODORS  
AND TRUCKS HAVE GONE AWAY,  
THERE IS NOT ONLY A STRANGE  
AND QUIET BEAUTY TO THE  
PLACE BUT A SENSE THAT LIFE  
HAS NOT YET EVEN BEGUN TO  
REALIZE ITS FULL POTENTIAL ...

# lifescape



NATURE



ARTS



SPORTS



EDUCATION



WALKING



FESTIVALS



PRESERVES



BICYCLING



## Lifescape

Fresh Kills Reserve

a reconstituted matrix of diverse life-forms and evolving ecologies

Whereas small islands of nature have in the past persisted in the midst of urban sprawl, that unsustainable pattern can now be reversed: Staten Island can assume its new identity as an expansive “nature sprawl”, a big spread of lush vegetation open space, birds, mammals and amphibians. Once backyard by-pass in a larger and more vital metropolis, Staten Island will now be recast as an expansive network of greenways, recreational open spaces, and restored habitat reserves – a new nature-lifestyle island, both destination and envy of the surrounding urbanites.

As a catalyst to this new identity, the reclaimed Fresh Kills Reserve will form an expansive green matrix of infinite horizons and newly connected ecosystems.

### Staten Island as Nature-Lifestyle Island:

The closure of Fresh Kills Landfill marks a significant shift in land-use for Staten Island – from a past condition with over 40% of land designated as industrial or vacant, to a future scenario where over 75% of the land area will comprise nature, recreation and residential programs, with over 40% designated as open space. This is both generous and appropriate given the fact that Staten Island supports more plant species, including many endangered species, than any similarly sized area in New York State. Because of its geographical location, glacial and estuarine geomorphology, range of soil types and microclimates, Staten Island is home to many southern species reaching their northern limits and many northern species reaching their southern limits. This creates a rich mix of ecosystems, many unique in the region, and some fundamental to the health of larger ecosystems, such as the estuary, the heron nesting island network, and the north-eastern migrating bird flyway.

The restoration of Fresh Kills may be directed toward creating a huge nature reserve, within which a representative sample of each major Staten Island ecosystem and open space type finds a place. Such a vision is not just for the birds – it marks a strategic repositioning of Staten Island’s identity as a place to live, raise children, visit and enjoy – a rich reserve in an otherwise densely urban metropolis.

Visible from the moon, with mounds of waste the size of mountains, Fresh kills remains the most complex land mass human beings have attempted to manipulate. Starkly elegant, the artificial topography offers a unique landscape experience. As such, the site presents an opportunity to develop a new form of public-ecological landscape, an alternative paradigm of human creativity, biologically informed, guided more by time and process than by space and form.

Nature, traditionally conceived as separate from cultural endeavor, can now be fully integrated into the man-made landscape. The result is a synthetic, integrative nature, simultaneously wild and cultivated, bewildering and cultivating. Nature is no longer the image we look at, out there, but the field we inhabit and belong to, an active lifescape, where life below ground, on the ground, in the water, and in the air, is continually manufacturing new environments as it reproduces and evolves.

This lifescape is rendered “cultural” to the degree that is wholly effectuated through human agency – through design. Lifescape is a design strategy that recognizes humanity as a symbiotically evolving, globally interconnected, and technologically system. Ecological reflection, passive recreation, active sports and exercise, creativity, performance and cultural events; community development, economic enhancement and neighborhood revitalization all take their place alongside the micro-macroscopic processes of lifescape. It is fully integrative. Lifescape is not a loose metaphor or representation – it is a functioning reality, an autopoietic agent.

At present, Fresh Kills Landfill is characterized by relative homogeneity and alien ecologies. To create a more diverse, integrated and healthy series of ecosystems – to redefine landfill as lifescape - an alternative process of re-colonization must be set in motion:

We propose a matrix of lines (threads), surfaces (mats), and clusters (islands) to maximize opportunities for access and movement – movement of seeds and biota as well as people and activities. Linear threads direct flows of water, energy and matter around the site, injecting new life into otherwise homogenous areas. Surface mats create a patch-like mosaic of mostly porous surfaces to provide self-sustainable coverage, erosion control and native habitat. Clusters of islands provide denser nests of protected habitat, seed source and program activity.

Taken together, this matrix permits early investments into ecological infrastructure that will initiate new processes of colonization across the site. As such, the site will continue to evolve and adapt, producing an increasingly diverse, self-sustaining environment. In time, this entangled colony of emergent organisms

and communities will render the different ecosystems of the site legible as different meadows, plantings, habitats and programs work with distinct slope gradients, soil-water gradients, solar aspect, and adjacent contexts.

The continual exchange of matter and energy assure a healthy ecosystem. Our plan maximizes interconnectivity, both within and outside the boundaries of the site. This interconnected matrix will established over time, seeded in the early stages of the project as instruments that engender their own unfolding. Plantings, waterways, pathways, facilities and structures each facilitate the beginning of a longer-term process of succession and colonization. The initial framework of surface mats, linear threads and clusters of islands is continually evolving into a self-sustaining matrix of possibilities, locally in flux as needs are redefined, yet maintaining a robust overall identity and high-level of ecological performance.

## The New York City Agency's Overall Goals and Objectives:

### General:

1. Meet the needs of the City's communities while responding to the constructed and natural features of the site:

*We recognize that Staten Islanders have long suffered with the Landfill, both physically in terms of trucks, odors and visibility, and psychologically in terms of Staten Island's reputation and image. We also recognize that Staten Islanders ought to be the first to enjoy the benefits of the landfills closure and renovation as a new public landscape. Lifescape provides residents with all their stated desires: it restores the site as green open space with amenities for passive recreation, sports, extreme sports, soccer, golf, equestrian uses, fishing, canoeing. It also provides a new road and circulation system that helps alleviate east-west traffic demands while also improving access and circulation in the reserve itself. The design is conservative to the degree that it fully recognizes the intrinsic opportunities and constraints of the site, creating a safe and well-functioning environment that responds to the different topographies and ecologies of the site.*

2. Recognize the site's unique size, topographical variation and metropolitan location as an opportunity for diverse land uses:

*Stark and elegant, the large mounds at Fresh Kills sit in an expansive inter-tidal wetland. The sheer scale and simplicity of this landscape is something lifescape aims to maintain. At the same time, lifescape works to establish a more diverse range of native ecologies and social programs. This strategy is key to the larger revitalization of Staten island's identity as a "nature-lifestyle" island, a rich reserve in an otherwise densely urban metropolis.*

3. Comply with all environmental and other regulatory requirements relating to the closure of the landfill:

*All environmental and regulatory requirements are met. Exceptions to the rule may include planting woody material on landfill caps, but this ought to simply require a variance, which given all of the research and precedents, ought to be straightforward.*

4. Provide a flexible planning and design framework for long-term, fiscally and ecologically sustainable, phased development of the site:

*Lifescape is designed to be flexible and adaptive. It is basically a strategy for revegetating the site over time, while outlining spaces where activities can occur. The vocabulary of surface mats, linear strings and clusters is intended to clarify the main principles of ecological organization, but are themselves plain with regard to placement and extent. Furthermore, specific programming and uses beyond this framework can be easily accommodated. Our plan shows one possible scenario and mix – others may be generated using the same landscape framework.*

5. Effectively identify and incorporate community interests in the planning and design process;

*We have identified as broad and inclusive a list of community interests and groups as possible at this time. We believe we have incorporated stated desires and are open to further amendments. We will be delighted to enhance this list, while incorporating input along the way, if our team is selected to further develop the plan. Our approach for this is outlined in the Technical report on "Community Participation."*

6. Set new standards for landscape, architectural and environmental design:

*This is something for the design jury to determine, although it should be noted that lifescape requires "design" to be understood less in terms of formal or stylistic composition and more in terms of what its geometries and forms instigate and engender. Lifescape's patchy, stringy forms work to channel flows of water, seeds, wildlife and people in such a way that new mixes and enrichments may be precipitated. Its physical appearance is the result of the processes it supports. And this formal vocabulary is extended from the landscape to the design of the architectural features, signage and communication, and lighting. To the extent that lifescape offers something "new", it would be fair to suggest that it recasts form and design away from passive representation toward active instrumentality.*

#### Design Objectives:

##### General Design, Land Use and Community Needs:

1. Establish strong physical and visual links to and from the site with surrounding neighborhoods, Staten Island, and the city and the region:

*The new east-west road systems, the central loop-road, and the proposed interchanges on the West Shore Expressway are intended to directly tie the site into the neighborhoods and regional circulation system. An extensive greenway trail system in the park reaches out to surrounding paths and potential greenway links on all sides of the site. The site's edge is permeable along Arthur Kill Road to the south, and from Victory Boulevard to the north, to maximize immediate neighborhood pedestrian and bicycle connections.*

2. Contribute significantly to the Staten Island community's stated needs now and into the future, including transportation, active and passive recreation and general land use activities:

*See above – General Objectives # 1..*

3. Create, also, a place of beauty and repose for the people of New York City, State and region, which reveals the unique character of the site and provides natural preserves for plants and wildlife:

*It will be hard to surpass the extent and generosity of the lifescape plan with regard to the establishment of native habitat, diverse ecosystems that are unique to the region, and social amenities. The plan is intended to capture the imagination and desire not only of local residents but of regional, if not national communities. Lifescape will be a unique resource and asset to the entire region.*

4. Create a practical, cost- and energy-efficient plan generating revenue not inconsistent with other community needs, and which addresses long-term maintenance and operations costs.

*See our proposal for this in the Report.*

#### Landfill Operations and Regulations:

1. Ensure the long-term integrity of the existing environmental protection systems and monitoring devices as well as post-closure landfill operations, including landfill gas, leachate, stormwater systems, the final cover and monitors as well as the overall stability of the landfill:

*The plan allows continued operations associated with the life of the landfill. It does not compromise the integrity of any of the engineering, monitoring or control mechanisms of the landfill. The proposed revegetation of the cap will actually increase its resistance to erosion and damage. See the data in the Report.*

2. Comply with all environmental regulations affecting the site.

*The plan meets all requirements.*

#### Ecology:

1. Support existing on-site natural resources and create additional sites of ecologically healthy habitat and open space:

*Natural resources are carefully inventoried in our plan and enhanced. Meanwhile, other areas of the site are remediated and revegetated. Landfill cover is replaced with native eastern prairie; swale lines begin the process of woody revegetation, eventually creating linear thickets and woodlands as corridors for the movement of seed and wildlife; freshwater swamps, swamp-forest and bog are recreated out of the existing stormwater detention ponds; edge salt-marsh is restored; and boundaries of the site are strengthened.*

2. Provide habitat connections to adjoining open spaces and waterways to support and enhance the region's ecological health:

*The plan shows a number of connections from inland sites to the waterways, as well as out from the site into adjacent areas – particularly Arden heights Woods, La Tourette Park, the Brookfield Park, Schmul Park, and riverfront connection to the north and south. The physical characteristics of the surface “mats” and the linear “threads” are intended to maximize ecological health and vitality through interconnectivity and linkage.*

3. Provide educational opportunities to increase public awareness and appreciation of the natural environment and the challenges of habitat and open space stewardship generally, and on the Fresh Kills site specifically.

*A wide number of educational opportunities are outlined in the Plan. Specifically, three areas provide an educational focus: i) the wetland strip along Richmond Avenue allows for a comparison between tidal salt-marsh ecology to the south and freshwater wetland ecology in the center and north; ii) a second wetland area in the middle of the site, by section 2/8, allows for a similar comparison, though with an emphasis on swamp forest (Cape May Lowland Forest); this area may also include an elevation transect up the mound to study prairie habitat; and iii) a very special juxtaposition of Sweetbay Magnolia Bog (an endangered and rare habitat) and restored tidal salt-marsh is sited on the promontory of the event area; this exhibit has a boardwalk and is intended to provide a dramatic contrast in both scale experience (from big outside to intimate inside) as well as ecological juxtaposition between fresh and salt-water ecologies.*

#### Implementation and Planning Process:

1. Establish a flexible physical and conceptual design and planning framework, within the context of regulatory requirements, to facilitate long-term, phased development of the site capable of responding to changing community needs:

*The design strategy of mats, threads and islands is inherently flexible: placements and geometries can be revised; sequence of implementation may be revised; programming and specific uses may be revised. The Plan encourages “adaptive management” – that is, the active modification and adaptation of the physical environment as needs and desires change – much like the way a farmer continually revises and modifies their landscape from year to year. The aim is to construct a landscape that is physically and ecologically robust enough to accommodate inevitable changes over time.*

2. Describe a method for identifying and linking phased development to significant site changes related to the dynamic landfill processes of decomposition, such as leachate generation and gas production, rather than to predetermined chronological milestones (e.g. five, ten, 30 year phases):

*The Plan is coordinated with the sequence of landfill operations and ecological processes across the site – see the section in the Report on Phasing.*

3. Establish zones of use and programming which would provide public access to the use of the site in the near future as permitted by health, environmental and general safety standards.

*The Plan establishes a wide range of zones : secluded nesting islands and natural areas, sports and recreation fields, arts and market areas, extreme sports areas, educational sites, boating and fishing areas, picnic areas, walking, jogging and horse trails, and communication and display sites. These are coordinated and organized to be public, safe and secure.*