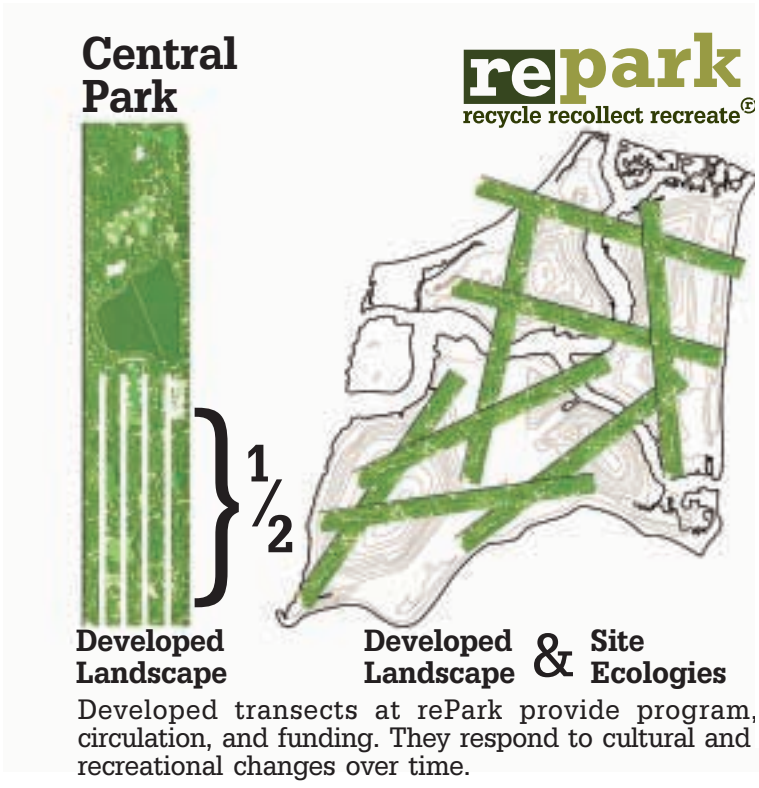
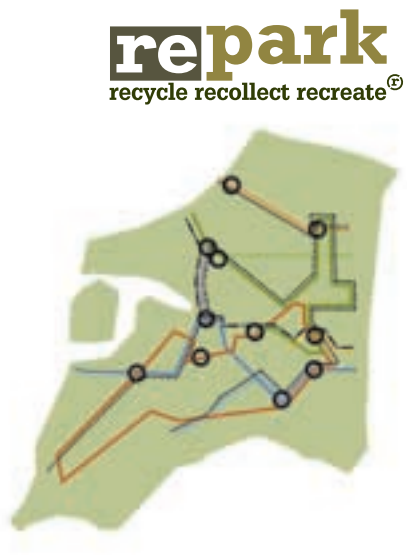
repark

recycle recollect recreate®



Developed transects at rePark provide program, circulation, and funding. They respond to cultural and recreational changes over time.

Transit Lines, Transfers and Connections



Landscape Transects, Connections, Destinations and Alternate Itineraries

The site at Fresh Kills tells an extraordinary story of evolution and change. Just as its history began long before its use as a landfill–now covered– its next incarnation will likely not be its last. In fact. at the moment, this ever-shifting landscape is measurable and even visible in the settlement of the mounds themselves. Our design approach is conceived to accommodate not only the inevitable ecological changes that accompany a project envisioned to have such a long life span, but also political and economic ones, and the alteration of priorities and agendas these can bring. Our proposal for this latest re-making of Fresh Kills, to be re-named **rePark**, intends to make change itself the theme, experience and lesson of the place. We propose to do this by first extrapolating a series of diverse "ecologies" from the differing regions of the site, and then projecting upon these a "Transect", or schedule of programs–each with its own timeframe--in order to provide for not one, but many possible sets of contingencies and itineraries. The result is that this "new" ground (above the landfill cover) becomes a programmable surface whose occupants—plants, animals, people—and appearance might change according to both the evolving state of the site (i.e. the landfill, the tides, etc.), economic conditions, and ideas of leisure (i.e. lifestyle, etc.). Visitors from all walks of life would have reason to visit the grounds all year round, as the site would neither look nor function the same from year to year, season to season—sometimes even day to day.

The first of the 2 principal organizational premises are the 8 ecologies: 1) Walking Wetland; 2) Roadside; 3) Woodland; 4) Tidal Wetland; 5) Freshwater Wetland; 6) Commercial Berm; 7) Landfill Mounds; and 8) World Trade Center Memorial Forest. All but the last are derived from the range of habitats found on the site, and are projected to evolve and change as natural systems with minimal maintenance practices. The last is intentionally comprised of non-native plant species chosen for their relation to the multi-cultural origins of the people who perished. In general, the ecologies act both as background for and are affected by the second site organizing device: that of the transect. The transects, of which there would be many at any given time in the life of the park, are conceived of as both temporary and longer term sites of events and programs created through the employment of installation practices not unlike those that might be used in the creation of an environment for a traveling exhibition at a museum or art gallery. These practices follow the uniquely American agrarian tradition of tending and working the land toward productive use rather than, as in most parks, being directed toward the maintenance of a single, static appearance. Instead, at **rePark** maintenance is scheduled and used to create change, the device by which the park as a cultural institution allows itself and ultimately encourages us to recycle, recollect and recreate.

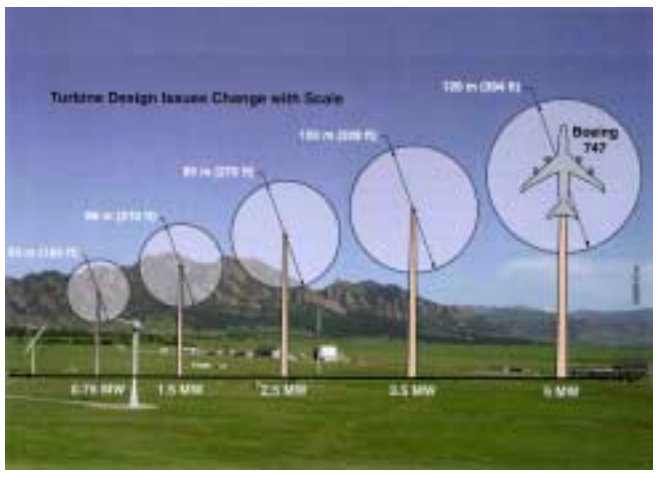
Alternative energy "farms"

Our team, with Dr. John Ingersoll of Helios International, Inc. has devised several strategies for implementing alternative energy production aimed at taking re-park "off the grid". In the form of “energy farms", the park will demonstrate in a holistic fashion, environmentally sustainable, renewable and alternative energy harvesting technologies that the US can employ across the country to eliminate dependency on imported oil. These are:

Biomass Farm

A biomass farm would produce energy by harvesting certain native plants that have finished their usefulness for phytoremediation (see listing) and processing them through anaerobic digestion to convert them to bio-gas. This method of gas production could, using the same facility as will be processing the landfill gas, continue to provide power to the city long after the landfill gas production ceases, but by employing the same facility. This biogas may be used to produce power at a rate of 20 million kWh per year or used to power natural gas vehicles such as the park's ReBus line. Generate efficient, clean, and renewable upgraded biogas (pipeline natural gas equivalent) motor fuel for the City of New York, including vehicles operated in the Fresh Kills area and Staten Island as well as ferry-boats from Staten Island to other boroughs. The annual biogas yield from this operation will 10 million cubic meters of biogas per year (65% methane, 35% carbon dioxide; equivalent to 250 million cubic feet of pipeline quality natural gas) and about 16 thousand metric tons of high quality soil conditioner, which can in part be applied to the landfill surface to improve soil productivity and in part be sold (or even given) to New Yorkers as a potting soil for their plants and for their gardens. The wastewater from the biogas plant will be processed at the existing Leachate Treatment Plant.

Wind Farm



A wind energy farm will integrate 34 large (50M-66M) wind turbines into the landscape of re-park, dramatically lining the west edge of the 440 as it sweeps through the site. It will exemplify and demonstrate how machines can be made to fit into the natural environment and at the same time providing for some of their energy needs. The U.S. Department of Energy National Renewable Energy Laboratory indicates a “good” wind potential for the site area. A 750 kW wind turbine such as is being being proposed will have an average annual electricity generation of 1.9 million kWh and will be sufficient to supply electricity up to 400 households. The wind farm would have a project life of 30 years, generating an income, based upon a rate of 11 cents/kWh, of $22,000,000/yr.

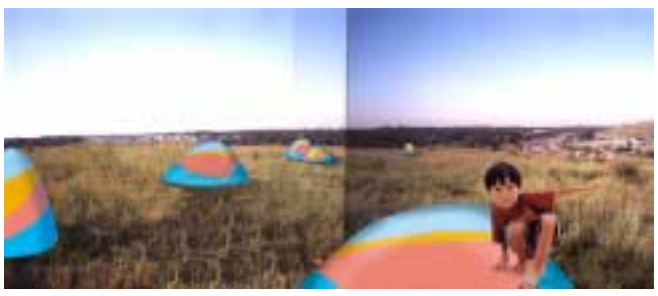
Solar Canopy Farm

The solar voltaic canopy will provide climate protection, particularly shading of vehicles and people in the summer time, as a means of energy efficiency (avoiding fuel use to cool building) and of improved human comfort. The solar canopy will be placed in the Roadside Ecology, and covers an area of approximately 100 acres. The “thin film” variety of solar cell technologies is proposed here due to sustainability issues. The annual revenue generate from this system will be on the order of $3.74 to $4.4 million; the City of New York would most likely to own and operate the facility. The output from the solar farm system may be used to offset power use at the **rePark** for public lighting as well as of the various structures and buildings. No electricity storage, i.e., batteries, at the site is envisioned due to cost, efficiency and environmental reasons. The grid will act as a temporary storage of the excess power not needed at the **rePark** at the time of generation.

Artists involvement

At **rePark**, art plays both cultural artifact and interpretive device. The transects which cross through the site not only become sites for art objects but as opportunities for the artists themselves to be "curators" of those landscape installations. That is the role assumed by the four artists on our team:

Almond Zigmund



In keeping with the idea of an ever shifting landscape and the contingent nature of time, Almond proposes portable, yet site specific sculpture. Depending on the duration of a transect, the pieces can be conceived and designed to be more or less permanent depending on the material out of which they are fabricated. For example, more temporary mounds, executed in wood, would activate and integrate a part of the transect not yet developed into the overall plan, whereas pieces executed in stone would be expected to exist "permanently", i.e. sculpture garden.

Greg Lock

Greg's proposal regards the ability of art to demonstrate the land's dynamic energy and its release over time, so specific to the changing nature of this site. His project, which consists of several pieces, contains living, growing elements which will alter over time, and in doing so remind us that we live in times of change and that our actions today have consequence on the actions of tomorrow.

Martine Kaczynski & Matthew Bakkom-

These multi-media artists have proposed re-use of decommissioned subway cars to create an interiorized, traversable transect which uncannily juxtaposes the urban and the pastoral.

Atlantic Flyway

shore bird migratory path which provides vital stopping areas for feeding. Prolific fruiting bushes and surfeit of bird houses are provided within the Woodland ecology to support this migratory path, in addition to the “tree bridge” which links the 2 principal pre-existing portions of woodland into a continuous path.

Barge

A flat-bottomed boat usually moved by towing. Trash barges were used to deliver waste to Fresh Kills from marine waste transfer stations located throughout the five boroughs. These trash barges have become recognizable as a symbol of New York City's waste issues. At such time in the future when the NYC Dept. of Sanitation will no longer require them, re-park proposes re-use of these barges as floating gardens which will act as “ambassadors”, allowing the site to “give back “ to the city-at-large.

1: Barges are moored at repark to provide garden rooms along the waterfront.

2 : Barges are planted to bring park landscapes back to the boroughs where they once collected trash.

Bicycle

The bike paths at **rePark** link to the larger network of routes that lace Staten Island. The park itself provides a range of types of paths to address a variety of kinds of biking. Mountain biking will be provided through transects. Casual biking will occur on the multi-use paths that the service access roads provide around the landfill mounds. The roadside ecology would be the occasional site of extreme biking and bike racing events.

Boating

Small, non-motorized boats such as kayaks, canoes and small sailboats may be launched at designated launch locations in the walking wetland, and may travel throughout the site, including both the Tidal and Freshwater Wetland areas, portions of which link via Richmond Creek to La Tourette and beyond. At a future time, no sooner than the beginning of Phase 3, motorized pleasure boats cruising New York Harbor will be allowed to dock along the Arthur Kill at the western edge of mound 1/9, south of the proposed ferry landing. At that point in time, when the leachate plant at the southern tip of 1/9 would be decommisioned, that structure would be converted into a Harbormaster’s Building for the launch, which would also include the use of the leachate facility parking lot, thereby enabling intermodal transfers (boat : car, boat : bicycle) .

Camping

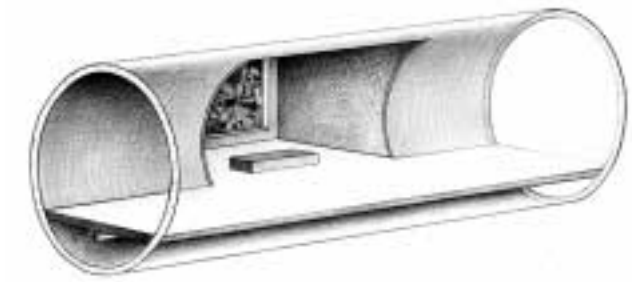
rePark's camp sites are located throughout the ecologies. Siting them in distinctly different environments produces the opportunity for different nature experiences during subsequent camping visits to **rePark**.

Central Park-

Less than one-third the size of **rePark**.

Center for Land Use Interpretation (CLUI)

One of our team members, CLUI is a non-profit research organization dedicated to the increase and diffusion of information about how the nation's lands are apportioned, utilized and perceived. It has designed an interpretive transect which concerns itself with the observation and demonstration of physical characteristics of the site and the landfill's history and dynamic conditions in particular.



Closure

See phasing.

Community Outreach

The community outreach process will begin with a series of community workshops and brainstorming sessions to solicit ideas for the transects, as well as to poll prospective visitors as to which of the proposed activities and events they would be most willing to pay for admission. These sessions could be conceived of not unlike the focus groups which advertisers and private companies conduct in order to test-market ideas and to profile the needs of the audience(s) they seek to attract. These would be held not only in advance of the initial planning of the park, but periodically throughout its ongoing operation (say a few meetings every 2 years) in order to keep the park programming up-to-date with emerging cultural trends. Outreach would also extend to the school system, where many of those likely to use the park might be asked to draw or paint what they would like to see at the site. Another means of outreach involves the use of the Center for Land Use Interpretation's (CLUI's) Field Office, a mobile exhibit space, which could travel throughout the 5 boroughs to inform a wider public audience about the history of the site, as well as to exhibit plans for its future development.

Con Ed Easement

One of the first 2 transects on the site already exists in the form of the Con Ed easement which passes across the tidal marsh in the northeast quadrant of the site, just south of the W.T. Davis Wildlife Refuge. It consists of wood trestles that either mark the line of electricity below the marsh or which used to carry its lines above it.

Context, relation to

During the first phase of development, **rePark** will effectively consist of three separate local parks. The programs and the designs of these parks are responsive to both the needs and physical characteristics of the communities in immediate proximity to them, and will continue to operate as such even after they eventually coalesce into one larger facility attracting the wider New York metropolitan area. The North Park, which includes Section 3/4, is dedicated to serving the **Travis / Chelsea / Bullshead / Bloomfield neighborhoods**; activities there are proposed to include sky theatre, an outdoor performance/movie venue; 1 or 2 hole 3-par extreme golf course/driving range; sportsfields; a picnic area; and exercise circuit that makes double use of the theatre steps as a "stairmaster". The key physical link between the new park and context here is the introduction of a new site entry, parking area and driveway which connects eastward from the East Service Drive to Schmul Park, forming a circulation loop between **rePark** and the adjacent area. A number of the transects in the park as a whole launch from or connect to this parking area. The East Park includes the Freshwater Wetland and incrementally-developed Commercial Berm; it will serve the **Richmond/LaTourette Park/Lighthouse Hill** area as well as visitors to the Staten Island Mall and adjacent retail centers. This park will offer flycasting, small (non-motorized) boating and fishing, and water (demonstration) gardens in the wetland. In the winter months, certain shallow ponds could be used as ice skating rinks, conveniently located is year round restaurant/warming house with a projecting deck for outdoor dining in the warmer months. In the initial phases of development, limited portions of the existing berm will be replaced with outdoor sports

enclosures for tennis and basketball courts, batting cages, golf driving range, etc. The commercial development of the berm is imagined to continue incrementally over a series of phases covering several decades. Transforming this important edge of the site for more active use and development is both consistent with the mission of the park--which is to reach out and engage the surrounding community–and with the City's desire to generate revenue which can subsidize the park's construction and operation. Its mix of nature and commerce is an expression of its location at the margin between a major commercial district on one side and a park on the other.

The South Park would primarily service the **Arden Heights / Greenridge / Village Greens / Huguenot / Rossville / Woodrow neighborhoods**. This largely wooded area would offer a sculpture garden, fields for soccer and baseball, a wooded campground, and a walking trail, an ATV course and a corn maze on differing portions of Section 2/8, which it includes and is publicly accessible in the first Phase. The sportsfields would line the entire western edge of the south park along the 440 to provide a noise buffer from the quieter activites occuring in the woodland itself. All would be screened from Arthur Kill Road by existing trees. Parking and restrooms would be provided in all three park locations, and it is envisioned that small to medium-sized garden restaurants would be added in most by the end of the second Phase, in addition to that at re-treat, in the heart of the park.

Corn Maze

A wide transect consisting of a free standing maze built from walls of living cornstalks. The corn is to be planted in early Spring so that the maze will be in use all summer into the early fall. Admission is charged at the entrance; the maze can also be rented for fundraising and other events.

Credits

Amy S. Greene Environmental Consultants
Curtis Helm

Artists
Almond Zigmund, Matt Bakkom
Martine Kaczynski, Greg Lock

Center For Landuse Interpretation
Cindy Hooper, Matt Cooldige
Sarah Simons, Steve Rowell

The Garbage Project
Dr. William Rathje, Kathy Cisco
Scott Eberle

Geto and DeMilly
Joyce Baumgarten

Helios International, Inc.
Dr. John G. Ingersoll

Margie Ruddick Landscape

Rios Associates, Inc.
Bob Hale, Danielle Langston
Donna Stia, Elizabeth Benbrooks
frank clementi, Ichiro Kakami
Israel Kandarian, Jennifer Gabrys
Jennifer Williams, Jennifer Schab
John Colter, Leslie Barrett
Clancy Pearson, Mark Rios
Mark Tessier, Nicholas Choy
Samantha Harris, Tony Paradowski

Roger Sherman Architecture and Urban Design
Dan Riley, Jeff McKibban
Greg Kochanowski

Wallace, Roberts and Todd, LLC
Laura Burnett

URS Corporation
Walter E. Gross, C. Duane Seaman, P.E.

Curatorial Management

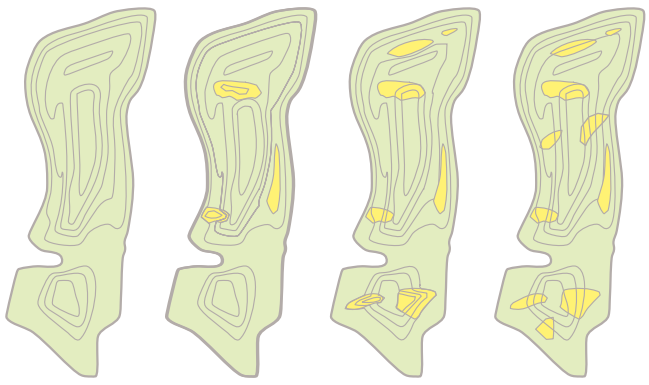
The management of re-park will be divided amongst 3 positions: a program and Development Curator, a Design Curator, and an Environmental Curator. The Program & Development Curator for re-park will be hired in October of 2002 to begin planning for the opening of the park's first transect in spring 2003. They will be responsible for funding and other park development issues. The Design Curator will come aboard at the same time. They will be responsible for hiring landscape architects, architects, graphic designers and artists to design different transects and installations on site, maintaining the high design standards for the park's subsequent development. The Environmental Curator with a background in ecology and environmental sciences will work in conjunction with the other curators to insure that each transect being proposed complies with all applicable local, state and federal regulations (see environmental compliance). The Environmental Curator will also enforce the park's mandate to further environmental research and education.

Daytrip

The design of the transects and programmatic facilities at re-park are predicated on the fact that with a park so large, visitors will spend widely varying amounts of time there. Their lengths are calibrated according to the time that each takes to travel in its entirety: i.e. a one-hour walk, a 3-hour mountain bike tour. Community parks on the park's northern, eastern and southern perimeter are available for a quick playground trip, game of tennis or pick-up basketball. Visitors from Manhattan would likely consider the park a destination for a full day's worth of

activities, perhaps staying for an evening performance. Boaters, such as members of the Hudson River Water Trail, can dock at the public boat launches along the Arthur Kill and spend the night at the park's retreat or at a choice of campsites along the 2 creeks. Other activities to indulge in during a daytrip at re-park include: playing a round of Extreme Golf, horseback riding, taking the Garbage Tour, any of which in combination with lunch or dinner at re-treat or, in Phase 3, at any of the re-cafes throughout the park at the sites of the former flare stations.

Differential settlement



Mound 6/7

Refers to the gradual, uneven decrease in height of landfill mounds, due to the non-uniform composition of buried waste resulting in different rates of decomposition. Our team is proposing that this dynamic process be revealed through a special maintenance practice wherein at the time that the DOS refills the resultant depressions in each mound due to differential settlement (in order to avoid ponding of stormwater), that the new fill be replanted with; Bearberry (Arctostaphylos uva-ursi), Pasture Rose (Rosa carolina), and low bush blueberry (Vaccinium angustifolium) material different from the bluestem grass (Andropogon gerardii), and switch grass (Panicum virgatum) with which each mound was/is to be initially planted. Visitors would be able to thereby witness the gradual transformation in the surface and texture of the mounds in a way that dramatically reflects the changes below the cover that might ordinarily go on unnoticed.

"Dump Heap" Theory

A theory of the origin of agriculture posited by Edgar Andersen in 1952. Piles of refuse near ancient communities may have provided a perfect environment for the discarded seeds of fruits and vegetable brought from afar to the community to sprout. Species that had never encountered one another would have been able to intermingle to create hybrids that would have been be eaten and eventually replanted leading to the infancy of agriculture.

Dynamic landscape

The ecosystems at re-park create changes responding to a combination of internal physical processes such as ecological succession and differential settlement (see definitions below and above) and cultural change, such as would be reflected in the programmatic content of the transects.

"Ecologies"

Ecology is the relationship of living things to one another and their environment, or the study of such relationships. At re-park, One of the 2 principal site organizational premises are the 8 ecologies. All but the last are derived from the range of habitats (see habitat) and native species found on the site, and are projected to evolve and change as natural systems with minimal maintenance practices. In general, the ecologies act both as background for and are affected by the second site organizing device, that of the transect:

1) Walking Wetland- some of the existing buildings and docks in this area will be removed, with the exception of the wood pier and walkway structures at which the barges currently are docked alongside Section 1/9. The salt marsh here will be fully restored and significantly expanded, along with the network of boardwalk paths give this ecology its name. Most will be no more than the 4'-0" in width that is permitted by local and state environmental regulations. Research buildings, a Sanitation Museum and a Museum of Marine Artifacts are housed in semi-enclosed structures that hover on piles above the reconstructed wetlands.

Aesculus x carnea	Ruby Red Horsechestnut
Betula nigra 'Heritage'	River Birch
Celtis occidentalis 'PrairiePride'	Hackberry
Gymnocladus dioicus	Kentucky Coffeetree
Ostrya virginiana	Amer. Hophornbeam
Quercus palustris	Pin Oak
Quercus phellos	Willow Oak
Taxodium distichum	Bald Cypress

2) Roadside- exits from both the north and southbound 440 lead, together with local access roads from Arthur Kill Rd. (Muldoon) and from Richmond Ave. (Yukon) into a parking lot that is the park's largest. This is the flattest ecology and its groundplane is comprised of asphalt, crushed stone, lawn grass, and painted graphics. Photo-voltaic panels of a Solar Farm serve as shade structures for automobiles as well as for shelters for the monthly flea market that will take place here. The 34 turbine towers of the Wind Farm line the 440 expressway, collecting energy and providing shade. This ecology is the principal area for track and field sports, tennis, basketball and handball. The skate park and waterpark are also located here.

Acer saccharum ‘Legacy’	Sugar Maple
Cercis canadensis	Eastern Redbud
Cornus sericea	Redosier Dogwood
Fothergilla major	Large Fothergill
Itea virginica	Virginia Sweetspire
Metasequoia glyptostroboides	Dawn Redwood
Pinus strobus Eastern	White Pine
Tilia cordata Littleleaf	Linden

3) Woodland- "Tree rooms" are laid out on a 50’ x100' grid to provide open clearings for campsites, picnic areas and parking lots. Paralleling the 440 bridge, a forested land bridge spans Fresh Kills and unites the previously separate northern and southern portions of this ecology, creating a continuous canopied “highway” to attract migrating birds and at the same time further connecting re-park to the surrounding Greenbelt.

Acer rubrum	Red Maple
Amelanchier canadensis	Serviceberry
Carya ovata	Shagbark Hickory
Cornus florida	Flowering Dogwood
Diospyrus virginiana	Persimmon
Juniperus virginiana	Eastern Red Cedar
Lindera benzoin	Spicebush
Quercus rubra	Red Oak

4) Tidal Wetland - This ecology is created through restoration efforts, beginning with a phragmites eradication campaign. Monitoring stations will be built, some for research purposes and some for public education.

Spartina alterniflora	Saltmarsh Cordgrass
Aster tenuifolius	Saltmarsh Aster
Baccharis halmifolia	Groundsel tree
Distichlis sipcata	Spike Grass
Ammophila breviligulata	Beach grass
Aronia melanocarpa	Black Chokecherry
Hudsonia ericoides	Golden Heather
Myrica pensylvanica	Bayberry

5) Freshwater Wetland- a series of shallow pools in this ecology will allow for creation of a water garden nursery. Some of the deeper pools will stocked for fishing while 1 or 2 shallow pools will be piped to be frozen in the winter for ice skating.

Amelanchier nantucktensis	Juneberry
Cephalanthus occidentalis	Button bush
Eupatorium purpurem	Joe-Pye Weed
Osmunda cinnamomea	Cinnamon fern
Peltandra virginica	Arrow arum
Chamecrista fasciculata	Partridge pea
Pontederia cordata	Pickerel weed
Rosa palustris	Swamp Rose
Veronica noveboracensis	N.Y. Ironweed

6) Commercial Berm- This ecology is phased to be implemented over the next 50 years. Commercial sports facilities with planted rooftops will be inserted into the berm creating an integration of building and landscape. The first building will be a community gymnasium facility.

Cornus racemosa	Gray Dogwood
Ilex opaca	American Holly
Ilex verticillata	Winterberry
Ilex glabra	Inkberry
Juniperus virginiana	Eastern Red Cedar
Kalmia latifolia	Mountain Laurel
Pinus strobus	Eastern White Pine
Symphoricarpus albus	Common Snowberry

7) Upland Mounds- This ecology is planted mainly with meadow grasses. The landfill mound ecology not have an inherent program. The mounds receive their program from the various transects which cover them.

Andropogon gerardii	Big Bluestem
Sorgastrum nutans	Indian grass
Schizachyrium scoparium	Little bluestem
Panicum virgatum	Switchgrass
Asclepias tuberosa	Butterfly weed
Chamecrista fasciculata	Partridge pea
Echinacea purpurea	Coneflower
Rudbedkia hirta	Black eyed susan

8) World Trade Center Memorial Forest- This ecology is envisioned as a serene space on the highest mound with a view to lower manhattan where the towers stood. Families of those lost in the tragedy will each be invited to plant one of 4 distinctive types of fruit-bearing or flowering trees in honor of their loved one. The Memorial forest is a place for people to hold memorial services and remember loved ones.

Ecological succession

the observed process of change in the species structure of an ecological community over time. In any ecosystem some species may become less abundant or even vanish over time. Similarly, other species within the community may become more abundant, or new species may invade the community from adjacent ecosystems.

Ecosystem

the interacting system of a biological community and its non-living environmental surroundings.

Education

re-park is dedicated to promoting intensive research and education for all ages and levels. The landscape at re-park is developed to be understood as transparently as possible: what you see is what you get. Educational programs such as the site interpretative tour (CLUI) and the Garbage Tour of the landfill samply borings, will deal with the subject matters of; the history of the site, its past landfill usage, and landfill dynamics. Contemporary recycling techniques, and display and demonstration projects of various commercially available

renewable and alternative clean energy technology will also be explored, including grey- and wastewater pond/gardens outside any park facility that has a roof and/or contains plumbing facilities inside. Curricula for K-5 could be included as an addendum to NYC Teacher's RRResource kit- RRR You Ready?, as well as the Center for land Use Interpretation's Mobile Field Office public exhibition space

"In the end, we will conserve only what we love. We will love only what we understand. We will understand only what we are taught." -B. Dioum

Environmental Compliance

rePark is designed to conform with the Coastal Zone Management Program, and the rules of the City State and Federal wetland protection programs. The practices proposed, such as wetland enhancement, the installation of open pile walkways within select wetland areas for passive recreation, and rehabilitation of waterfront structures to uses that are compatible with park design, will result in minimal disturbance to Tidal Wetlands or Adjacent Areas. Any activities proposed in Tidal Wetlands or Adjacent Areas are considered to be "Generally Compatible" and to therefore qualify as Minor Projects under the Tidal Wetland Program. These same activities should also be authorized under the ACOE Nationwide Permit program. RePark is not proposing any impacts to freshwater wetlands; the construction of vernal pools or of walking paths for passive recreation would occur outside of the edges of the freshwater wetlands, in unregulated areas, or via floating pontoons in the ponds themselves.

Extreme golf

A speed based golf game based on fervent strokes through exotic, quirky and difficult terrain. Played at breakneck speed, the game allows a round of play in around an hour, and lets you get in a workout at the same time!

Ferry (Interborough)

A ferry boat system is proposed for RePark. Beginning in Phase 2, ferry landings will be provided in each of New York's 5 boroughs, such as, in Manhattan, at the southern end of Hudson River Park. The ferry is intended to provide an easy and pleasant journey to begin and end a day trip to re-park. re-park's ferry landing is located on the Arthur Kill, along the western edge of Section 1/9, and largely utilizes the existing wood pier walkways that presently service the barges in what will become the walking wetland. Yet further to the south, a small boat marina would eventually be located in phase 3, with adjacent parking and Harbormaster's structure in a reuse of the then decommissioned leachate processing plant

Flare Stations

Location where collected landfill gas is piped to and burnt off. After their decommission, the flare stations will be reused as refreshment areas, housing cafes (recharge) and restrooms(refresh).

Flower & Garden Show (transect)

The New York Horticultural Society has teamed up with Home and Garden Television (HGTV) to reinvent the famous annual Flower Show into a semi-enclosed Flower and Garden Show transect at **rePark**.

Fresh Kills

The name of the landfill located on the site of re-park that was in use from 1948- 2001. Fresh Kills is the name of the creek which runs through the site, "Fresh Kills" means "fresh stream" in Dutch.

Garbology

Term coined by Prof. William L. Rathje and The Garbage Project, begun in 1973, to describe his research concerning the archeological study of garbage.

Garbage Dig Tour Transect

The Garbage Project has proposed a "Garbage Tour" transect based on archeological core samples taken from Fresh Kills in the years before its closure. The "Garbage Dig Tour " would involve seven (7) excavation sites, each with its own message about garbage, New York, and American Society. Each group of sites would also have schematics of the garbage underfoot as well as displays of dozens of excavated remains, with questions posed to the visitor that the artifacts beg to be asked:

Wells 1&2 (70's and 80's garbage)
What is garbage? Where does garbage come from? How is it collected and transported? How is it buried at a landfill? What happens to it in the ground?

Wells 9, 10 & 11 (early 1970's garbage)
The Seventies- Garbage and the Environmental Movement.

Wells 12 & 13 (70's and 80's garbage)
The "Garbage Barge" and the "Garbage

Crisis"- How have our attitudes of responsibility towards our garbage and the environment changed?

Wells 5,6, and 7 (60's and 80's garbage)
How is garbage related to our increasing standard of living and more consumer convenience? Does a higher standard of living and more convenience mean more garbage.

Well 14 (70'S and 80's garbage)
Educating our children- integrating and summarizing messages 1-4.

Well 8 (1988 garbage)
The closing of the landfill 1988- the last excavated garbage.

Wells 3&4 (70 &80's garbage & view of New York Skyline)
The latest garbage- World Trade Center remains. What do they say about the American Spirit?

Garbage Rodeo

A rodeo based on the cowboy prototype, but which features contests judging sanitation maintenance skills for cash prizes. For example, garbage truckdrivers compete to see how nimbly they can weave between garbage cans or how quickly they can speed down a simulated alley to pick up and empty dumpsters. Bulldozers race to pick up an egg from the top of a traffic cone with their shovels.

Greenbelt

The 2,500 acre Staten Island Greenbelt is an ecologically rich portion of open space in Staten Island. The greenbelt includes wetlands, woodlands, stream corridors, and ponds. It borders re-park on the north and east and is continued throughout the park via the woodland, tidal and walking wetland ecologies on site, the same ecologies that link it to local wildlife corridors.

Habitat

the place or environment where a plant or animal naturally occurs.

Harvesting

The gathering of economic crops grown at **rePark**. Also, the collection, on site, of alternative energy from naturally occuring phenomena. (see alternative energy-biomass) Grass will be harvested, dried and formed into hay bales, or large bundles. The haybales will also be used in the park as transect formwork and as buffers for the more extreme sports.

Infrastructure

Infrastructure is the underlying and at times inconspicuous framework for a system of public works such as a city sewer system. At **rePark** there are two main sets of infrastructural systems at work:

1) Landfill infrastructure
Fresh Kills Landfill leaves behind a complicated and specific landfill infrastructural system. This infrastructure includes the final cover drainage system, the active recovery system for landfill gas emissions, the landfill gas migration control system (see vent pipes), the leachate (see leachate) control and treatment system, the stormwater management system and the monitoring systems that observe them.

2) Park Infrastructure
rePark will contain new or improved infrastructural systems which are more or less standard for most large parks roadways, landscape drainage, lighting/electricity distribution, phone/ data network, water, sanitary sewage, lighting, biogas processing (from the harvested grass), parking, signage, and waste processing and renewal.

Isle of Meadows

Harvested for salt hay until the end of the 19th Century. Upland habitat was created from decades of dumping dredge spoils on the island. Today, the Isle of Meadows is under NYC Parks and Recreation jurisdiction and its restricted access is in part due to its extremely valuable heronry habitat.

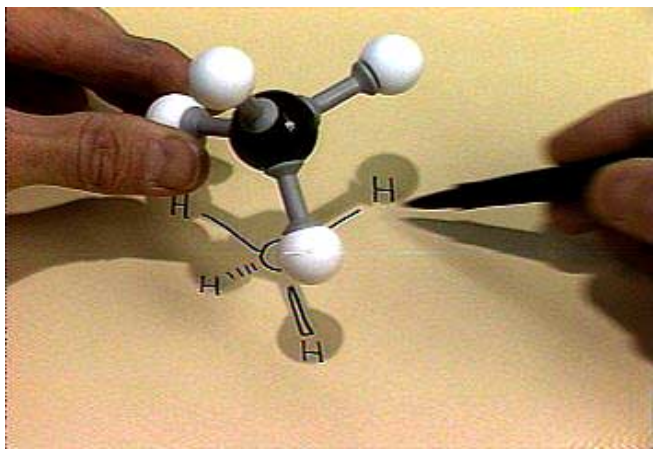
Itinerary

The itineraries at re-park that the crossing transects allow are analogous to the use of New york City's subway system. Though each of them defines one selected path, they can be used in multiple in forming a myriad of unique itineraries if one transfers between them. As one follows any one transect as it passes through various ecologies, one confronts a constantly changing succession of experiences. At any given crossing point, one may switch to an adjoining transect, affording a choice of park experiences and destinations.

Landfill Cover Canopy

The name of the canopy cover for the Garbage Dig Tour Transect. This overhead structure provides a shaded route to explore the park and to reinforce itinerary shifts onto different transects. The covering material is made from the same liner which encloses the landfill mounds

Landfill Gas



A by-product of naturally occurring decomposition of a landfill. Landfill gas is comprised of 50 - 60% methane, 40 - 50% carbon dioxide, and less than 1% hydrogen, oxygen, nitrogen, and other trace gasses. Methane is the major component of landfill gas: a colorless, nonpoisonous, flammable gas created by anaerobic decomposition of organic compounds. Methane is also found in large proportion in the natural gas used in the home as well as in Bio-Gas (see entry). The production of landfill gas on site is likely to be negligible after 30 years.

Linoleumville

After the civil war, The American Linoleum Company established a factory and the company town of Linoleumville, where innovative linoleum products as well as floor cloths, ground cork and linseed oil were produced. Linoleumville was located to the north of re-park, where the community of Travis is today.

Living Ads (transect)

This transect, which lines the 440 expressway along the west slope of Sections 3/4 and 2/8, and east slope of 1/9, is available for rent to companies to advertise certain renewable technologies, resources, and environmentally related issues.

Maintenance Practices

Refers specifically to the performance of the service work necessary to keep the park functioning at a certain state. The maintenance operations at re-park are generally of two types. The ecologies require a minimal level of maintenance operation once established. For the most part, they will be left to evolve on their own. The transects are relatively temporary in nature and require installation, upkeep and disassembly. during their duration. These practices could include such operations as planting, mowing, furrowing, dredging and harvesting.

Mall

Staten Island Mall is the only regional mall located on Staten Island. Staten Island's extensive road network places the center within 15 minutes of every resident on the island.

Marketing / Merchandise

RePark's easily identifiable and memorable name is intended to associate this distinctive place with a marketable product development. The ReStore at RePark carries a line of products which can also change with respect to the changing programs and events at the site, much in the way that MoMA capitalizes upon its visiting exhibitions to spur continued demand for product. See image of the re-park AcidRaincoat.

Memory

The history of **rePark** is written in the earth. But history can be easily ignored, lost through erosion, or planted over. In the same way that people fight our own forgetfulness through mnemonic devices such as writing histories or songs, at **rePark** this is accomplished through several maintenance practices which animate the ground surface through devices such as site gauges and differential settlement planting patches. (see education, Greg Lock, diferential settlement)

Mitigation

The method by which actions are taken to avoid, reduce, or compensate for the effects of environmental damage. At re-park, the actions taken are those that restore, enhance, create, or replace damaged or compromised wetlands.

Native Nursery

RePark will enter into contract growing with the Department of Parks and Recreation Greenbelt Native Plant Center to cultivate much of the plant material to be used in the restoration of the wetland areas.

Olmsted, Frederick Law

Olmsted's small intervention in the tidal marshland of the northeast quadrant of the site was in part the inspiration behind the notion of the transects we have developed. Although more associated with maintenance practices than with program or circulation,

the system of parallel lines which marked his dredging of the marsh around 1930 both give measure to the landscape and at the same time ease the flow of water in the marsh, preventing the water from becoming stagnant and posing what was at the time a possible threat of malaria.

Parking

Parking at RePark may be found during Phase One throughout the North and South Woodland Ecology and intermittently along/in the Commercial Berm. In Phase 2, the park's main parking lot will be located in the Roadside Ecology, shaded by the field of Photo Voltaic Panels which constitute the Solar Farm.

Phasing:

The process of designated occasions in the closing of FreshKills as a landfill. These milestones, which dictate the succession of steps upon which the end use is to be developed, are based essentially on the dynamic process of decomposition of the landfill mounds themselves:

Phase 1: Final Closure (6-8 years)
During this period, Re-Park would effectively operate as 3 separate local parks, each of whose programming would be directed toward serving the communities within immediate proximity to them. Parking and restrooms would be provided in all 3 park locations. A special set of transects will be installed during this phase: those which monitor and explain the changes taking place on the mounds and in the tidal wetlands. As requested by the community, certain of the chief existing landfill access roads will, during this phase be selectively opened up to public use, pending the approval of variances to make certain restricted access areas available for this purpose. These would include the crossing of Section 6/7 and the frontage road running between Section 3/4 and the West Shore Expressway (440). . The creation of dedicated entry/exit to and from the 440 and the park will be facilitated by the introduction of a new frontage road between the 440 and Section 2/8, which will tie into the existing access road that runs across Richmond Creek and joins Yukon heading east, making it possible to reach Richmond from either the north or southbound 440 without having to use either of the 2 local arteries that edge the site.). Finally, though it will not yet connect to its existing counterpart to the north or to the 440 until the next phase, Muldoon Ave. will during Phase 1 be extended southward to provide access to South re-park from Arthur Kill Road. During this first phase, improvements would also be make to the existing road, which includes the renovation of the bridges

Phase 2: Post-Closure (after 8 years)
During this phase, certain new ecologies (Walking Waterfront, Roadside, World Trade Center Memorial Forest) and portions of others which were initiated in Phase 1 (Landfill Mounds 6/7 and 1/9, the Tidal Wetland and the Tree Bridge connecting the 2 portions of the Woodland ecology) would be installed. It is the expansion of the transects during this phase, however, which ties the actual experience of the larger site together. (The Museum of Sanitation is also commissioned at this time, as the keystone of both the Landfill Operations Transect and the later Interpretive Site Transect). Vehicular circulation through and within the site all but completes itself during this period, with the lone exception of the Muldoon Ave., which must remain operative in 2 separate segments, north and south of the DSNY Garage and LFG Recovery Plant, until the area around the latter is opened to public access in Phase 3 (see below). Access to the new main parking area, in the Roadside ecology, is provided by means of an exit off the southbound 440 which loops back around to the north and merges with Muldoon just north of the LFG Plant.

Phase 3: After Post-Closure (after 30-40 years)
The north and south sections of Muldoon are finally connected with the completion of an underpass beneath the 440. The "decommissioned" flare stations are converted for reuse as coffee kiosks and restrooms (re-charge and re-fresh) under a Dept. of Parks and Rec.-licensed franchisee. An intermodal marina is established at the southern tip of 1/9, reusing the decommissioned Leachate Filtration Plant and parking lot as a Harbormaster's Facility for visiting boats from the New York harbor area.

Phytoremediation

Certain types of toxics-eating plants may be planted on a contaminated site as an aesthetically-pleasing, solar-energy driven, passive method of remediating, or cleaning up sites with shallow, low to moderate levels of contamination. Phytoremediation research and demonstration garden transects at re-park will help to make this important environmental science technique more common public knowledge.

Picnic Area

Picnic areas are scattered throughout the park in tandem with community playgrounds, but are also organized into a spectacular extended "5k" picnic table, an exaggerated version of the common picnic table extruded to seat hundreds of people, constituting a transect of its own.

Playgrounds

re-park's playgrounds are located at its

edges, where it meets the adjacent communities that it will most likely service, namely in the north and south portions of the Woodland Ecology and at several intervals of the Commercial Berm.

Pontoon Bridges

Several floating wood bridges, stored in the Walking Wetland, will serve as points of connection for transects which cannot be served adequately by the 2 existing bridges over Main and Richmond Creeks. These swing open to also to act as gates to control boating access to adjacent waterways.

Restoration

To return an ecosystem from a disturbed or totally altered condition to a previously existing natural condition by some action of man.

Re-

prefix 1:a: for a second time: 2)anew; in a new or different form.

re-bus

a free intra-park amphibious shuttle-bus which runs on biogas generated from the processing of biomass from the harvesting of the mound plant material (see biomass).

recess restaurant

Meaning a secret or secluded place, or a place where business is suspended in order to rest and relax, at **rePark** recess is the name of the restaurant adjacent to re-treat (see listing above). Its slatted window walls creating a "bird blinded" view onto the vibrant surrounding wetlands creating a dining environment like no other. The facility would provide amenities for corporate functions and gala celebrations. A terrace on the landward provides for alfresco dining and cocktails in the warm months.

Recycled Materials

re-park is committed to the reuse of any existing material and facilities on-site that are not intended to be demolished, relocated or sold for salvage by NYDOS. These include the hundreds of electrical power poles which currently dot the site and are reusable as vertical supports for the extreme golf course are in the construction of crib walls for the flower and garden show; as well as the wood docks that currently line the Walking Wetland along the Arthur Kill that currently receive the landfill barges. The maintenance operation of the site will be a second source of materials for the transects, including haybales from meadowgrass harvested from the mounds. Similarly, the roof water, wastewater and waste products from all facilities would be recycled in the form of adjacent demonstration gardens (see wastewater). The use of recycled materials from off-site will also be a source of construction material in the making of the transects, such as recycled newspaper retaining, tires and plastic lumber, to name a few.

RePark:

repark

recycle recollect recreate®

The slogan of RePark, which makes references to the varied goals of the park.

To recycle is to adapt a thing to a new use or to return to an original condition so that condition can begin again (while also referring to cycling as sport). To recollect refers to remembrance, namely of both the World Trade Center victims memorialized in the special WTC Forest atop mound1/9, but also to the site's previous incarnations as well as artifacts buried in its mounds. Recollect also incorporates the connotation of "collecting again", as is done time after time in scientific investigation. The word recreate derives from the latin word recreare, to create anew. Recreation leads to the restoration of health through leisure activity, thereby referring to both a new life for the landfill and to the activities it will sponsor for its visitors.

ReStore

See product development.

re-treat

re-park's 250-room Lodge, Conference and Exhibition Center, which provides retreat

services and educational programs for groups and individuals in a relaxed setting. Comfortable day use, conference areas and overnight accommodations are available in a "green" building employing the latest sustainable materials and technologies (active and passive), such as newspaper retaining walls, recycled tires, recycled yogurt container sheeting and wastewater pond/gardens. Also contains world-class research and library facilities. re-treat yourself!

Retention Basins

The small ponds which lie at the base of the landfill mounds to collect, clean and return stormwater to the surrounding wetlands.

Revenue Generation

rePark is, by design, able to leverage its natural resources and unique situation incrementally to financially capitalize its own development. The strategy of employing the power of a naturally evolving ecological succession will be extrapolated into the economic development strategy. The total projected income for the project is based on the anticipation that over the duration of the project, only 50% of the potential for income will be available to finance investment in overall park, community, and infrastructure development.

Three broad income producing programs are anticipated to be developed as sites becomes available: Energy Generation, Recreation Uses, and compatible commercial Uses. These uses will require minimal capital investment for infrastructure beyond that which can be incrementally justified on an individual return on investment basis.The berm at the eastern edge of the site and the existing roadways provide relatively easily developable locations for early utilization that require little investment in infrastructure.A combination of energy generation, commercial uses and some commercial recreational uses can be developed with out additional overall infrastructure investment. Income produced by these early uses will be used to finance capitalization for later phase infrastructure and park improvements, such as bridge expansions, ecology establishments, transportation improvements, etc.

Total Projected (IBITA) Income-
(assumed to be 50% of total potential)
$13,658,288

Subtotal of Potential revenue to project
$27,316,575

Each use assumes its own capital investment requirements within its own income, with the exception of Community.

Total Energy Generation Related Income
$7,500,000

Wind Energy Farm	$6,000,000
Bio-Mass Farm	$700,000
Solar Energy Farm	$800,000

Total Commercial Related Uses
$12,657,200

Community Uses	
Non-Commercial	$0
Community Commercial	
Sports	$200,000
Major Attractions	$1,000,000
Water Park	$1,200,000
Camping	$657,000
Entertainment	$2,400,000
Cultural	$2,400,000
Parking	$5,000,000

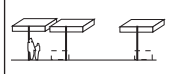
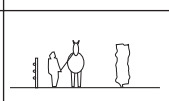
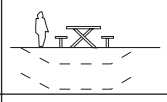
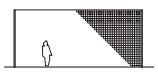
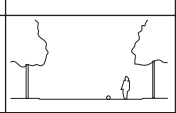
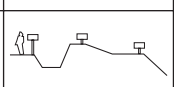
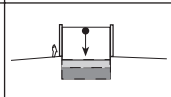
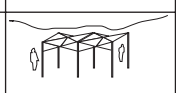
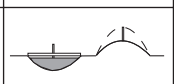
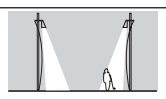
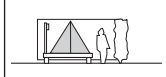
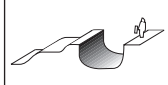
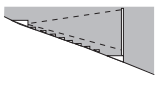
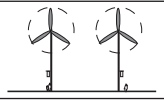
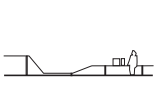
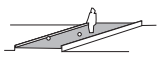
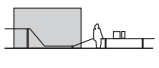
Total Commercial Development Uses
$7,159,375

Exhibition Center	$2,000,000
Conference Center	$500,000
ReTreat Center (250 room hotel)	$1,779,375
Retail	$2,880,000
Available for Park and Infrastructure Capital repayment per year	$13,658,288

Total Supportable Infrastructure and Park Capital Investment
$455,276,250

Sanitation Museum

A museum dedicated to the study of sanitation, landfills and garbology. This museum is entirely built from recycled building material. It is located in the walking waterfront. There are permanent displays regarding the history of the landfill and of New York City's sanitation history. There are also exhibits to help reinforce important information about solid household waste and question how we can change our lifestyles to improve our environment. Children love the walls made of compressed cans, the benches made of used tires and garbage sculpture. There are interactive examples of recycling. Museum admission is free to the public.

repark	Schedule of Upcoming Events		
Transect Materials & Maintenance		**Period Of Use**	**Connection**
1 **Flea Market** photovoltaic shelters, painting		May -August: Second Weekend Of Each Month, Beginning 2007	Connects commercial berm to Arthur Kill road to main parking area (roadside) and retreat / conference/ exhibition center
2 **Equestrian Trail** fencing, soil		May -August: 2nd Weekend Of Each Month, Beginning 2007	Loop connects commercial berm (Stables) To restaurant and on to camping/picnic area
3 **Picnic Area** wood decking, dredging		Annually Spring/Summer/ Fall Beginning 2007	Connects ferry landing to roadside (tailgating) and to commercial berm, also connects restaurant to view of mound
4 **Sports Courts** Tennis, Handball, Etc. painting, fencing, asphalt		Year Round Beginning 2007	Connects roadside (main parking lot) to retreat
5 **Sports Fields** Soccer, Baseball, Etc. seeding, mowing, chalking		Year Round Beginning 2007	Passes through south woodland park from south shore golf course to richmond county country club
6 **Exercise Circuit** erecting, mowing, pruning		Year Round Beginning 2009	Connects Schmul Park with park. Connects ferry landing with "retreat"/ conference/ exhibition center/inn and then on to South Woodland Park
7 **Wet Zone** Water Slide, Wading Pool, Swimming Pool, Skating Rink dredging, painting, fencing, solar panels to heat pool		Annually June 21- September 21 Beginning 2010	(Local)
8 **Landfill Facilities** Tour, Garbage Project Borings fencing, pruning, erecting, mowing		Annually Beginning January 1, 2010	Connects sanitation museum, garbage project, sample borings (14), (mounds 1/9, 2/8, 3/4, 6/7), to main parking lot (roadside)
9 **Site Gauge** Tidal Change Mound Settlement Erecting		Year Round Beginning 2012	Connects freshwater wetland to section 6/7 and on to tidal wetland
10 **Extreme Golf** Pruning, Netting, Lighting, Mowing, Raking		April 17, 2012- October 12, 2020	Loop connecting commercial berm to South Woodland Park to retreat, conference/ exhibition center to north park
11 **Artist 3 & 4** Matt Bakkom Martine Kaczynski Subway Cars, Tracks, Blocks	See Vignette	April 1, 2014- October 7, 2020	Connects main parking lot (roadside) to ferry landing (across 1/9)
12 **Campground** Planting, Pruning, Wood Decking, Gravel		Annually May 21-October 21 Beginning 2015	
13 **Artist 2** Greg Locke Sowing, Netting/ Fencing Dredging, Furrowing	See Vignette	May 3, 2018- May 3 2038	Connects mound 6/7 to main creek
14 **Corn Maze**		August 1- September 31, 2024	
15 **Playgrounds** Sowing, Pruning, Mowing		August 1- September 31, 2024	Connects Schmul Park to tree ecology
16 **Artist 1** Almond Zigmund Mounding	See Vignette	March 23, 2009- November 1, 2030	Connects Schmul Park to commercial berm (via Main Creek, section 6/7)
17 **Garbage Rodeo** Red Clay, Chalklining, Construction Cones, Netting	See Illustration	August 27/28 2031	(Local)
18 **Sculpture Garden** Mowing, Hay Bales, Resurfacing		May 3- November 1, 2035	South
19 **Interpretive Walk** Center For Land Use Interpretation Tunneling, Metal Shelters, Signage	See Vignette	Spring/Summer/ Fall 2039-2044	Connects treatment facilities to monitoring stations
20 **ATV/ Motocross Course** Mounding, Patching		June 21, 2048- September 21, 2054	Connects roadside ecology to landfill mounds
21 **X-games Championships** Wood Decking, Hay Bales, Fencing, Furrowing		September 12-20, 2076	Connects roadside ecology to mound topography
22 **Sky Theater** Part Of Exercise Circuit Wood Decking, Hay Bales, Retaining/Furrowing, Mowing		September 12-20, 2076	View of New York City skyline
23 **Wind Farm** Banner Allee Erecting, Hanging		Annually First Weekend In July	
24 **Garden Show** Planting, Erecting, Painting		Annually First Weekend In July	Commercial berm to botanical research facilities
25 **Bocce Ball, Lawn Bowling** Decomposed Granite, Wood Sideboards		Year Round	(Local)
26 **Experimental Plant Research** Sowing, Netting/ Fencing, Dredging, Furrowing		Ongoing (Dates Vary)	Connects botanical research facilities to tidal wetland. Also local within freshwater/ tidal wetland

Scheduling

The timetable for implementing the park design phases with the landfill closure phases.

Skatepark

This park is really tight yo! Big verts are in full effect. The 'crete is slammin' and the combo of it's killer lines, righteous spine and sweet hips to hit makes RePark tha bomb!

Sky Theatre

an open air movie theatre and performance space located on the hillside of landfill mound 3/4 which provides a breathtaking vista spanning from the wetlands to the skyline of lower Manhattan.

Subway Map

Inspiration for re-park's network of transects.

Traffic

Given the clear concerns voiced by the local neighborhoods with regard to the possible increased traffic demands in connection with the new park, community meetings will be a primary means of ascertaining (together with transportation and planning agency officials) the relative level of comfort with the way that we have proposed routing traffic to and through the site (see phasing, and envisioning the introduction of additional modes of public transportation to ease the private vehicular load.

Transect

The second of the two major site organizing devices (the ecologies being the other), the transects are conceived of as mostly temporary but also some longer term sites of events and programs created through the employment of installation practices not unlike those that might be used in the creation of an environment for a traveling exhibition at a museum or art gallery. in much the same way as fashion shifts quickly in our culture, the transect system leaves the park open to accomodate cultural change. The transects, of which there would be many at any given time in the life of the park, employ practices that follow the uniquely American agrarian tradition of tending and working the land toward productive use rather than, as in most parks, being directed toward the maintenance of a single, static appearance. Each transect would be conceived to pay for itself; as with a visiting museum exhibition, funds would either be raised in advance of the installation through the contribution of corporate sponsors or private benefactors (the job of re-park's curator of programs and development); earn the equivalent in gate revenues; or a combination of both. In-kind donations of recycled materials by companies seeking to market themselves are only one of a number of other sources of creative funding that could be imagined.

Vent Pipes

It is proposed that the methane vents that grid themselves across each landfill mound be fitted with polished stainless steel discs that will reflect the light and color of the sky. The glimmering field discs will call attention to the roll that the vents play as a device which orders and regulates the paths and geometries of the transects.

Wastewater/Greywater Ponds and Gardens

Through a combination of settlement, filtration through gravel beds, aeration, and filtration through reed beds, waste water can be cleansed sufficiently to use as irrigation water or be returned to the naturally occurring waterbodies. With the addition of moderate bacterial and/or chemical treatment, the water can be rendered pure enough to drink. re-park will, by necessity recycle all of the water used by any new program to recharge groundwater, irrigate new plantings, and potentially supply drinking water. This would incorporate the use of pools/ponds to allow solids to settle out of the water. More noxious materials (human wastes, e.g.) are filtered through below-grade gravel beds. Flow forms, cascades, other devices will also be used to cause the turbulence necessary to reoxygenate the water. For instance, certain of the ponds which comprise the Freshwater Wetlands would involve the filtration of gray and brown water from the new buildings inserted into the berm alongside it. This filtration could also be accomplished through the use of reed beds, since constructed wetlands capitalize on certain species' ability to metabolize contaminants, removing heavy metals and other pollutants from the water.

(see phytoremediation)

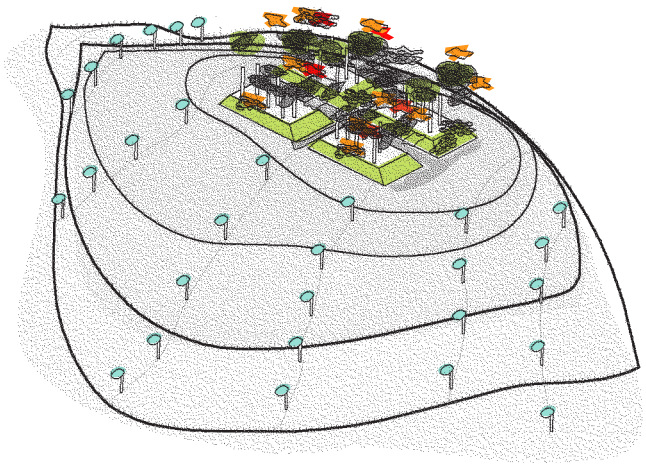
WaterPark

The superscaled WaterPark will provide visitors with opportunities to splash in mist-sprayed, shallow water play elements, plunge down water slides (down the slope of 1/9), tan on small beach areas or play water polo and sand volleyball. It will also provide a place for swim lessons and water exercise, and the photovoltaic panels that surround it serve as giant umbrellas. In the winter season, the water slide would double as a toboggan slide, the wading pool for a skating rink.

Wetland

An area that is regularly saturated by surface or groundwater and subsequently is characterized by the prevalence of vegetation that is adapted for life in saturated soil conditions.

World Trade Center Memorial Forest



A stand of approximately 4,000 trees (the final number to match the actual number of victims) fills the exact outline on Mound 1/9 where the debris from the World Trade Center tragedy of September 11 lies buried just below. On this highest of the mounds at re-park, with a distant prospect of the altered skyline of lower Manhattan, people will come to remember their loved ones or simply to come to terms with the occurrence itself. The family of each victim would be offered a place in the Forest, along with the choice to plant 1 of 4 types of trees, each of which produces distinctive cones, acorns, flowers, or beautiful leaves which each family take home as a memento of their visit.

White Pines, Tulip trees, Gingkoes (male) and Pin Oaks are all handsome, elegant trees. While the chosen location for the forest possesses symbolic significance, it also presents environmental challenges for growing a traditional forest. 3 to 6 feet of supplemental soil depth will enhance the trees' rooting capabilities. Winds and Salt Spray blowing in off the Arthur Kill will lend a sculpted "espalier" form to the trees. This quality will infuse the forest with a contemplative solemnity.

Pinus strobus,
known commonly as White Pine is evergreen with five bluish-green needles per bundle. Their narrow 6" green cones mature to brown with silvery tips and curve slightly as they open. These Pine Cones are one of the best cones for decorative arrangements.

Liriodendron tulipifera,
called Tuliptree, Tulip Poplar, or, Yellow Poplar, is deciduous and fast growing. The large, scented, tulip-like flower has greenish-yellow petals, green sepals and a bright orange and yellow corolla encircling a spire of immature aggregate fruits. Tulip Poplar is one of the best trees for yellow to golden-yellow fall color.

Ginkgo biloba
(male), called Ginkgo, or, Maindenhair Tree Possibly the oldest living seed plant in existence, Ginkgo is a living fossil dating from before the Jurassic era that links the lower and higher plants, ferns and conifers. This ancient tree has long and short branches growing at right angles creating a distinctive pattern. Its beautiful, bilobed fan-like light-green leaves catch the breezes in spring and summer then turn a vivid golden-yellow in the fall.

Quercus palustrus,
or Pin Oak, is a moderately fast growing tree. The lower branches have a markedly downward swooping habit, its glossy dark green leaves turn yellow, then russet or red in the fall. Pin Oak's acorns are 1/2 inch long, round, with a thin and saucer-like cap, covered with flat, reddish brown scales.