



garfield

green zone project phase II

Bloomfield Garfield Corporation

Prepared By:

Western Pennsylvania Conservancy

evolve environment::architecture

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bloomfield garfield corporation
5149 penn avenue, pittsburgh, pa 15224
www.bloomfield-garfield.org

western pennsylvania conservancy
800 waterfront drive, pittsburgh, pa 15222
www.waterlandlife.org

evolve environment::architecture
5300 penn avenue, pittsburgh, pa 15206
www.evolveea.com

richard swartz
aggie brose

gavin deming
michael knoop

christine mondor
elijah hughes
daniel klein

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BACKGROUND



The Garfield Green Zone Project is intended to test the proposition that intentionally protected and improved green areas in Garfield offer a positive strategy for anchoring future revitalization of the hillside community. The purpose of this project is to work with the Garfield community to determine how a “Green Zone” might support other community aspirations. The three phases of work include:

1. Assessment of existing conditions and information needed for a successful clean up of the area (Phase I);
2. Identification of options for potential reuse of the area including views, paths and other visible improvements (Phase II); and, finally,
3. Development of a vision and strategy package to help guide specific green infrastructure improvements.

Bloomfield Garfield Corporation (BGC) and the Western Pennsylvania Conservancy (WPC) worked with community members to complete the first phase of the Green Zone project in spring 2015. BGC, again asked WPC and its partner evolveEA (Evolve) to undertake the second phase of the Green Zone project. This second phase builds on previous work using the information gathered and momentum built during the first phase to help formalize the Green Zone, looking to create a comprehensive plan with clear directives on how to preserve and use the land. This work stems from the “Garfield 2030” plan, completed in 2010. The Garfield 2030 plan identified green spaces as an important asset for the community as it redevelops. Specifically, the plan contained the following community goals:

- Create a good quality pedestrian environment including the addition of street trees, lighting, furniture and trash receptacles and improvements to sidewalk. Adjust neighborhood infrastructure to correspond to neighborhood population and density. Reduce inefficiency of streets and other infrastructure;
- Increase public open space. Garfield has relatively little good open space in the neighborhood. It occupies a total of 5.8 acres, or 2% of the neighborhood area, mostly in wooded steep slopes. Moreover, both national standards and Pittsburgh’s zoning code are more restrictive about building on steep slopes than in the past.
- Create a framework that promotes preservation of ecological systems

and overall sustainability through improvement of natural hydrology, balancing greater density with better open space, conserving energy and resources, and local food production.

A continually stated directive of the Bloomfield Garfield Corporation's Board of Directors is to avoid BGC property development in properties north of Kincaid Street. Instead, as per the 2030 Plan goals listed above, the Green Zone work aims to "create a good quality pedestrian environment," "increase public open space" and "create a framework that promotes preservation of ecological systems and overall sustainability" for the benefit of the neighbors and neighborhood of Garfield.

Phase II of this project intended to take these goals and offer recommendations in a more specific direction that can ultimately result in implementation. In addition, as part of the agreement, WPC agreed to inventory the street trees in the designated Green Zone and offer some potential opportunities for street tree and restoration tree plantings that could be implemented in partnership with WPC through the TreeVitalize Pittsburgh program.

WPC convened meetings and discussions with many potential stakeholders and partners that may be involved with Green Zone implementation moving forward, and provided mapping analysis and ground analysis throughout the process. A lot of initial ground work and analysis occurred during Phase I, but Phase II led to additional analysis and survey. WPC and Evolve were able to determine more opportunities for recommendations, as well as discover connections in Garfield that had not previously been made.

It is important that we acknowledge the contribution many residents have made to help steer this report by participating in public meetings, BGC development committee meetings and partaking in many conversations with local residents and business owners about their wonderful neighborhood. We also thank Bloomfield-Garfield Corporation's executive staff, Roy Kraynick of Allegheny Land Trust, Megan Ziegler of Pittsburgh Water and Sewer Authority, City of Pittsburgh Planning Department, Pittsburgh Urban Redevelopment Authority (URA), Pittsburgh Community Reinvestment Group (PCRG) and Councilman Reverend Ricky Burgess and his staff for their valuable input. The Garfield Green Zone will become an attractive set of green assets for Garfield residents to enjoy with so many partners working together.

PHASE I RECAP

It is important to note the foundation for this second Phase of the Garfield Green Zone. During the first phase, four overarching concepts were developed to realize the opportunity Garfield residents had when approaching the Green Zone: 1) [See the Views](#); 2) [Save the Trees](#); 3) [Nature Places](#); 3) [Connect the Dots](#); and. A brief description of each concept is listed below from the Phase I report:



See the views refers to the special location of Garfield on steep slopes that offer spectacular views of other parts of the city. Identifying some of the most interesting views could enhance the “beads” along the Green Zone and offer some “destinations” for visitors and residents alike.



There are some handsome and mature trees in the Green Zone that are threatened by vines that are smothering the tree branches and crowns. These trees offer important “environmental services” to the community in the form of capturing storm water, cleaning the air, shading and aesthetic value. In addition, they provide an anchor for the local environment—a certain look and stately history of the community landscape.



In addition to the trees there are some specific sites along the Green Zone corridor that might serve as pleasing nature places for residents and visitors to enjoy. While all of these would need future enhancement, it would be worth a community review to select the most interesting “beads” on the green necklace of Garfield.



CONNECT the DOTS

Connect the dots refers to the opportunity that exists to use city steps and the potential paths through green space to create a better used and more extensive pedestrian and cycling network for local use. Existing steps and pathways form the bare bones of a potential system that could significantly enhance the options for residents interested in healthy walking and cycling in a green setting. The Shamrock Way path from could guide an east-west connection of “dots” throughout the neighborhood.

These basic concepts realized from the Phase I planning, convening and reporting serve as the bedrock for the following Phase II recommendations.



Shamrock Way leading from
N. Pacific Avenue toward its
end near Winebiddle Street.

TREE ANALYSIS AND RECOMMENDATIONS

As noted previously, a part of the agreement for Phase II was for WPC to provide the Garfield community with some direction to target tree-planting efforts in the Green Zone. WPC manages the TreeVitalize program, an organizational partnership with TreePittsburgh, the City of Pittsburgh, Allegheny County Parks, the Department of Conservation Resources and other community groups and municipalities that has successfully planted nearly 30,000 street and restoration trees in Pittsburgh and Allegheny County since 2008. In addition, this partnership undertook an intensive assessment of all street trees throughout the entire City of Pittsburgh in 2014 with Davey Tree Services and is updating the database on a regular basis so that The City of Pittsburgh and other appropriate organizations can have the most up to date street tree information possible in helping to inform decisions and improve the streetscape and community environment.

Sites that are suitable for a TreeVitalize community planting include sidewalks that are ADA-compliant width (at least three feet wide), have space for 30 square feet for a tree pit placement, clearance of utility poles wires and other overhead obstructions, lack of underground utilities present, decent sidewalk structure and permission from adjacent property owners. With City permission, trees may also be planted in City-owned parcels so long as there is an expectation that no development will occur in 25 years. Using the tree inventory database as well as on-the-ground observations, WPC's community forester analyzed the streets throughout the Green Zone and determined there were opportunities for community tree plantings along the following streets:

- Hillcrest Street between Winebiddle Avenue and Pacific Avenue;
- N. Aiken Avenue between Broad Street and Columbo Street, particularly the east side of the road;
- N. Graham Avenue between Broad Street and Columbo Street, particularly the west side of the road;
- N. Fairmount Avenue between Rosetta Street and Hillcrest Street;
- Millvale Avenue between Rosetta Street and Kincaid Street;
- Mathilda Street near the intersection with Rosetta Street;
- Rosetta Street near Millvale Avenue and Mathilda Street.

In general, Kincaid Street, Broad Street, Aiken Avenue, Graham Avenue, Hillcrest Street, and Fairmount Avenue have good sites scattered throughout the length of these streets. Not every space will work due to sidewalk width variability and state, as noted above. Though some sites have too narrow a sidewalk, they could potentially qualify to get a tree in their yard. Some sites have a sidewalk too narrow, but there is a tree lawn between the curb and sidewalk, which could still qualify with further analysis.

Below is a map of the existing trees in the Green Zone as well as vacant tree sites along the streetscape that could receive trees. Housing Authority property and streets south of Kincaid Street were not analyzed in this exercise.



TreeVitalize applications become available a season ahead of time to allow the management team to review applications and do ground assessments of each qualifying application. It is important for applying groups to get the permission of property owners prior to application submission. In addition, WPC community forestry staff must talk through planting concepts with applicants to determine that the project is viable. Garfield has been a recipient of TreeVitalize trees on numerous occasions and in all 59 TreeVitalize trees have been planted in the Garfield neighborhood, with an active application in the works. The community can apply for 10 trees for every Tree Tender involved in the planting. Tree Tenders are certified educated community tree advocates that have gone through the Tree Pittsburgh administered course. Course opportunities occur at various times throughout the year for anyone who wishes to participate. There are a few Garfield residents who are Tree Tenders.

If selected as a tree planting community, the applicants are expected to recruit neighbors and volunteers to plant the trees with the support of TreeVitalize staff. TreeVitalize staff provides all tools and materials needed for a successful planting event.

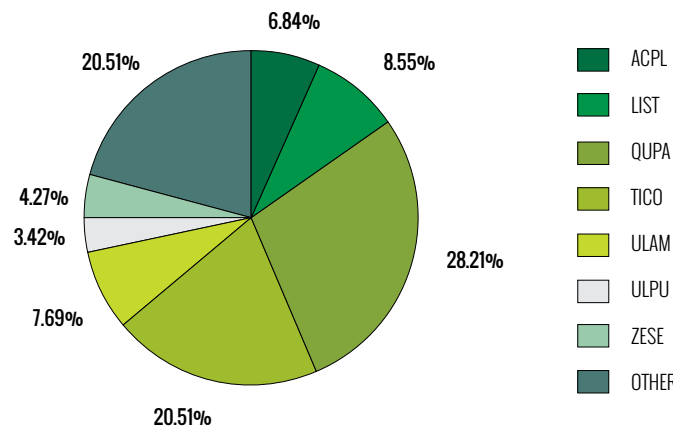
There are many opportunities to add street trees throughout the Garfield neighborhood and specifically in the designated Green Zone.

The WPC community forester took inventory of the street trees found in the chart and graphs below. There was a relatively diverse spread of species observed, 23 in all, though Norway maple and Siberian elm are both considered invasive species in our region. A healthy urban forest canopy should consist of less than one-third of any one species of tree, and in this way, the Green Zone portion of Garfield are in healthy shape.

There are many opportunities to add street trees throughout the Garfield neighborhood and specifically in the designated Green Zone.



BOTANICAL	SPECIES	COMMON	COUNT	COMPOSITION
Acer platanoides	ACPL	Norway Maple	8	6.84%
Liquidambar styraciflua	LIST	Sweetgum	10	8.55%
Quercus palustris	QUPA	Swamp oak	33	28.21%
Tilia cordata	TICO	Littleleaf linden	24	20.51%
Ulmus americana	ULAM	American elm	9	7.69%
Ulmus pumila	ULPU	Siberian elm	4	3.42%
Zelkova serrata	ZESE	Japanese zelkova	5	4.27%
		OTHER	24	20.51%
		TOTAL	117	100.00%



The forester also spent time analyzing the woods of the Green Zone. The following observations were made: One large area to target with site prep and cleanup is between Shamrock Way and Rosetta Street, Evaline Street and N. Pacific Avenue. The tree canopy is very sparse here, and there are several open spaces with no trees at all. Site prep would be pretty simple: remove garbage/foundation rubble and treat invasives as needed. All trees would need cages for deer and vine protection. Annual maintenance days would be needed to cut back vines and invasive shrubs from around the tree cages. All of these activities would be a perfect fit for the large-scale volunteer days that the BGC orchestrates. There are some old foundations and existing building rubble is also likely present. If it's shallow, some soil amendments may be necessary. But that can be investigated quickly with a pick and shovel once desired project areas are identified.

A secondary area similar to this is across N. Mathilda Street (the Mossfield site) where there is a large flat dumping site.

In the more forested interior, between Winebiddle Street and Mathilda Street, around Fort Pitt Park, there are some pockets where the canopy cover is a bit lacking. A couple spots are comprised mostly of dead ash and dead or dying black locust. In these areas, restoration trees can be added; more of a mid-successional species component due to the partial shade. The lots on Hillcrest Street at the intersection with Fannell Street were also noted as a location "just begging for some trees."



WPC community forester analyzing the woods surrounding Fort Pitt Park.

GREEN ZONE GOALS

The area and properties that comprise the Garfield Green Zone present a unique opportunity to Garfield resident and neighborhood advocates who are looking to have and use public space in their own neighborhood for outdoor recreation and ecological improvement. Rarely in a dense residential neighborhood such as Garfield (ranked 18th of 90 in the City and almost 1.5 times the Citywide average) does one see so many vacant parcels strung together in a contiguous or nearly contiguous space as in the Green Zone. In the spaces we identified, a large portion of the parcels are owned by only a few primary entities: the City of Pittsburgh, the Housing Authority of Pittsburgh, and the Urban Redevelopment Authority of Pittsburgh (URA), and Pittsburgh Public Schools (PPS). A few properties are owned by active non-profits such as Bloomfield Garfield Corporation (BGC) or Garfield Jubilee, and a few are privately owned yet delinquent. The majority of these parcels belong to the first three. If a property is privately owned but is current in its tax payments, it is not considered in this analysis.

A great majority of the vacant properties in the Green Zone have not been addressed with any type of development or proactive use for many years. As a result of many years of neglect, they have been used as spaces for trash to collect, and for persons to use as intentional, hidden dumping grounds of items not suited for curbside pickup (couches, construction material, excess road asphalt, etc.) On the other hand, with little human use, a large swath of this land has grown into a young wooded area, home to many animal species and good opportunity for observing and engaging with nature.

It is important that as community members and organizations undertake a comprehensive plan for the Garfield Green Zone, they keep good design in mind, letting accessibility and opportunity guide decisions as the Green Zone takes shape and intentional function begins to formalize. It must also be recognized that many people already utilize components of the Green Zone. The following goals are meant to draw these uses together as greater opportunities, uniting the space and the people who do and can use it:

- Integrate + Connect
- Preserve + Play
- Acquire + Plan
- Restore + Rebuild

GREEN ZONE GOALS

INTEGRATE + CONNECT

Make Garfield a more walkable neighborhood by creating two pedestrian loops around the hilltop. These routes ensure that open spaces for recreation, agriculture, and future development are accessible and promote an active lifestyle for all of Garfield.

PRESERVE + PLAY

Acquire properties as they become available to create contiguous greenspaces and high quality recreation areas.

ACQUIRE + PLAN

Acquire properties as they become available to create contiguous green areas for potential trailside development or parkland.

RESTORE + REBUILD

Fill in the gaps and provide quality, affordable housing as outlined by the Garfield 2030





INTEGRATE + CONNECT

Make Garfield a more walkable neighborhood by creating two pedestrian loops around the hilltop. These routes ensure that open spaces for recreation, agriculture, and future development are accessible and promote an active lifestyle for all of Garfield.

Existing Assets:

The Garfield Green Zone already has functioning assets throughout the space that, when woven together through designated pedestrian connections, will serve as the foundational projects and organizations that will promote additional greening.

Garfield Community Farm



Garfield Farm entrance at the corner of Columbo Street and Wicklow Street.

Established in 2008 as a project of Open Door Presbyterian Church in partnership with nearby Valleyview Presbyterian Church in Garfield, Garfield Community Farm is a small urban farm operating near the northeast corner of the Garfield Green Zone between Fannell Street and Elora Way, Cornwall Street and Columbo Street. The farm operates to serve the community by growing organic produce on site at affordable prices to residents, while also educating and inviting participants through volunteer opportunities. Garfield Community Farm property is owned by both Open Door Church and the City of Pittsburgh. Garfield Community Farm has been attempting for many years to purchase all of the property they utilize or would like to utilize, from the City. There are positive implications, but no official deals have yet been made. For more information, please, visit their website, www.garfieldfarm.com.

Healcrest Urban Farm



Healcrest Farm and surrounding parcels.

Healcrest Urban Farm is a private business located between N. Pacific and N. Atlantic Avenues, with Shamrock Way cutting through it. Active space consists of privately and publically owned lots. Its mission is to advocate for the preservation of artisanal, local & healthy food in Pittsburgh and the conservation of sustainably-managed green space. Healcrest Farms products include ice pops and teas made from herbs grown on site. Its website is www.healcresturbanfarm.com. The owner of Healcrest Farm has expressed interest in incorporating her Farm into the plans of the Green Zone, with a desire to continue business while keeping the land preserved as an agricultural space.

Kite Hill Park



Kite Hill Park between Hillcrest Street and Rosetta Street that sits in the block between N. Graham Street and N. Fairmount Street.

Kite Hill Park is a small park located in the east end of Garfield between Hillcrest Street and Rosetta Street. It contains a basketball court on top of the hill with pedestrian access from either street. In City of Pittsburgh Planning's 2012 Open Space plan, Kite Hill Park was slated to be decommissioned as an official park, but thanks to community advocates and a lot of personal time and energy investment, Kite Hill Park remains an official park and a space for people to congregate for recreation in a space of the neighborhood that otherwise lacks public gathering spaces.

Hillcrest Park



Hillcrest Park along Hillcrest Street between Elora Way and N. Aiken Street.

There is a small parklet that is currently in disrepair and between Elora Way and N. Aiken Avenue along Hillcrest Street, owned by Garfield Jubilee. It appears that at one point is served to beautify the neighborhood, but it had not been tended to for years. In recent month, potential partners have expressed interest to BGC to once again care for the space so that it may benefit neighbors.

WALKABLE STREETS

Walkable streets bring the green Zone into the neighborhood, improving access and connectivity.

Hillcrest Street begins on the western side of the neighborhood in front of Fort Pitt Park and the former Fort Pitt Elementary school and runs east until it dead ends at Fairmount Avenue. The street, sitting at the top of the hill, is relatively flat. Due to the geography of the neighborhood, it remains encapsulated within the neighborhood, failing to connect to communities beyond Garfield, yet does run adjacent to a large portion of the designated Green Zone. N. Pacific Avenue connects to Penn Avenue and the commercial corridor at the bottom of the hill and edge of the neighborhood, and rises north. N. Pacific Avenue is separated between Jordan Way and Kincaid Street, just south of the Green Zone, but continues through the Green Zone corridor, dead ending in the Housing Authority property at what could become a walking trail, to be discussed later.

These two corridors create a spoke of sorts that connect with nearly all other existing components of the Green Zone as well as touch potential opportunities. Fort Pitt Park, Healcrest Farm, Hillcrest Park and Kite Hill Park all touch these corridors.

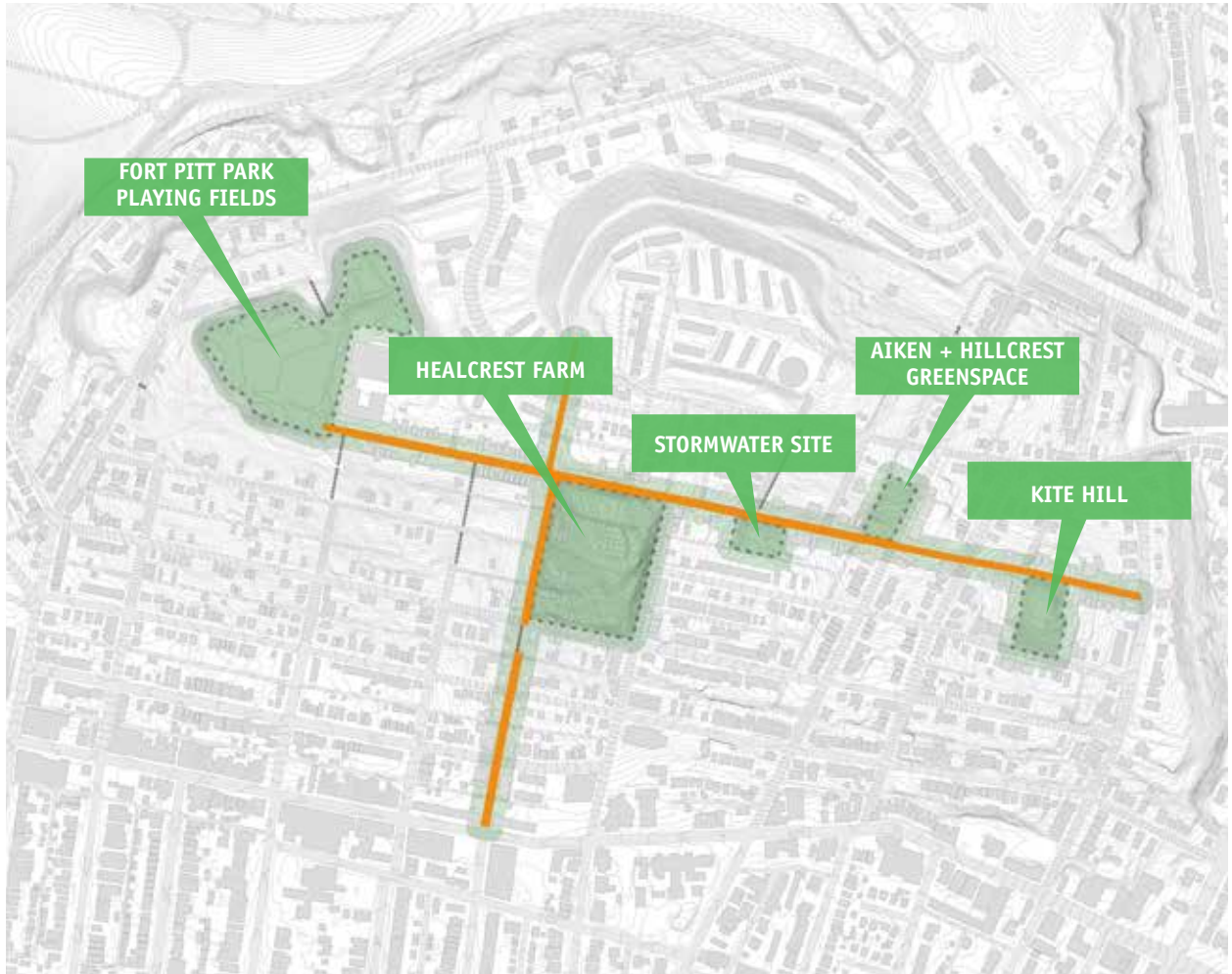


N. Pacific Avenue at Hillcrest Street looking toward Penn Avenue.

HILL TOP: IMPROVE THE STREETSCAPE

Walkable streets could have:

- benches
- clear signage
- bike stations



CONNECT THE PIECES
TO CREATE AN AMAZING
GREEN ZONE

- WALKABLE STREETS
- + HILLSIDE TRAILS
- + PEDESTRIAN ALLEYS
- + TRAILSIDE DEVELOPMENT ZONES
- + COMMUNITY OWNED VACANT PARCELS
- + MUNICIPALLY OWNED VACANT PARCELS



HILLSIDE TRAILS

Just below the hill where Hillcrest Street dead ends in the west is a sizable swath of wooded properties that surrounds Fort Pitt Park. These contiguous properties are relatively flat and contain the potential to connect to road paths such as Shamrock Way, as well as continue to connect to additional unofficial paths that run along the edges of the Housing Authority's property. These de facto trails were created by pedestrians using landscape terraces developed as a means for water capture when the land was leveled for development of public housing in the mid-20th century. There are drains along this path at regular intervals. The unofficial trails along the Housing Authority property have steep hills on either side of the footpath, but are quite wide and completely level. The first swath of Housing Authority land dead ends near tenant homes, just off of Columbo Street. It picks up again at the top of N. Pacific Avenue and in a very flat manner, wraps around the hillside and eventually empties at Warble Street.

Some initial maintenance and upkeep, wayfaring signage, intermittent benches and low profile lighting would transform these spaces into a very high quality connection of trail that connected much of the neighborhood north of Kincaid. A trail system that spanned from Fort Pitt Park around through the Housing Authority properties, down Elora Way and onto Hillcrest Street to its origination point, come to 1.5 miles for both hillside trails and roadways.

Hillside Shelf on Housing
Authority Property,
February 2016

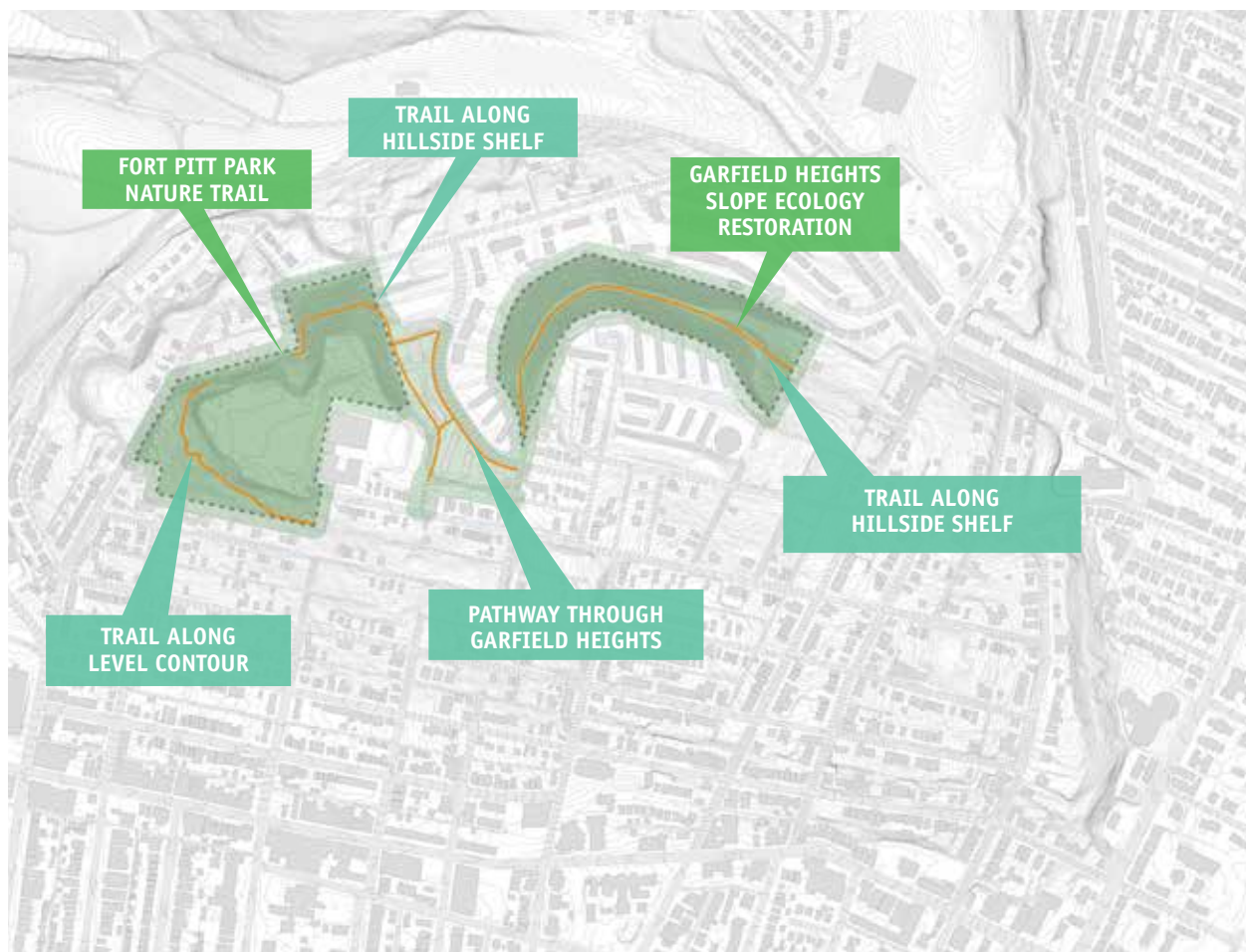


HILL SIDES: CREATE A LOOP TRAIL

Trails along the wooded hillsides offer access to the heart of Garfield's green spaces. By creating continuous connection through the neighborhood, trails have places to go and are always nearby.

Hillside trails could have:

- benches
- lighting
- fitness stations
- clear signage





Fannel Street city steps and the Garfield water tower.

PEDESTRIAN ALLEYS AND STAIRWAYS

Key streets that connect this loop, as alluded to in the previous paragraph, include alleyways that are rarely used by vehicles due, in part to the lack of development on each street. These alleys include Marble Street, Shamrock Way, and Elora Way.

Marble Street extends the trail from the eastern part of Housing authority property to a stretch of contiguous vacant, primarily owned vacant parcels. Aside from two buildings on the north side of Marble Street and two homes on the south side of the street at the corner of Marble and Elora Way, these vacant lots total nearly 3 acres of land.

Elora Way connects Marble Street to the primary East-West corridor Hillcrest Street and also sits adjacent to Garfield Community Farm and Hillcrest Park. The director of Garfield Community Farm has mentioned that there is an alley, Edlam Way, that runs through the Farm from Cornwall Street to Columbo Street and could also serve as a corridor to invite interested recreational traffic into that space as a side detour to the greater Green Zone loops.

Shamrock Way runs parallel to Hillcrest Street in the Green Zone and serves as the access point into Healcrest Farm. Heading west, it is an almost idyllic pedestrian way with vacant lots and a few back yards from Hillcrest Street properties and nearly contiguous vacant lots below off of Rosetta Street. It even includes “Garfield Springs that flows across the roadway, creating a wetland in the property below. Shamrock Way continues as a paved road until just after N. Winebiddle Street steps, when at this point, the road ends but a trail naturally continues into the wooded property, making the Green Zone Trail complete.

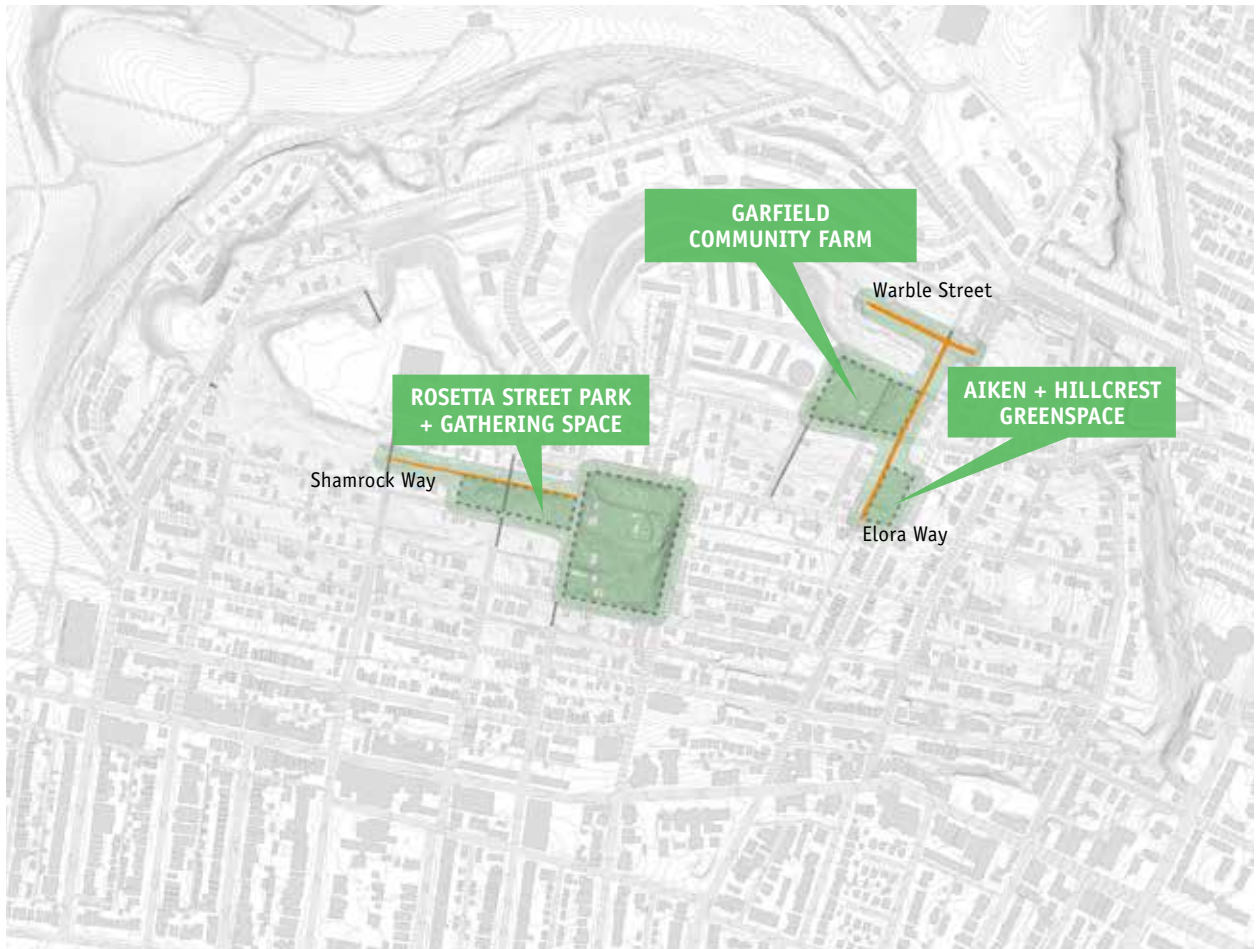
Along the way, there are sets of public stairs that make connections between these roadways and alleyways, including N. Winebiddle Street, as previously mentioned, as well as N. Eveline Street near to N. Pacific. These stairways do get regular, but infrequent use from residents. If Fort Pitt School is opened once again, they will almost certainly see more use. As long as they remain public modes of transportation it is important that they are kept up for safety.



Winebiddle Street steps with public vacant lots on either side of the steps.

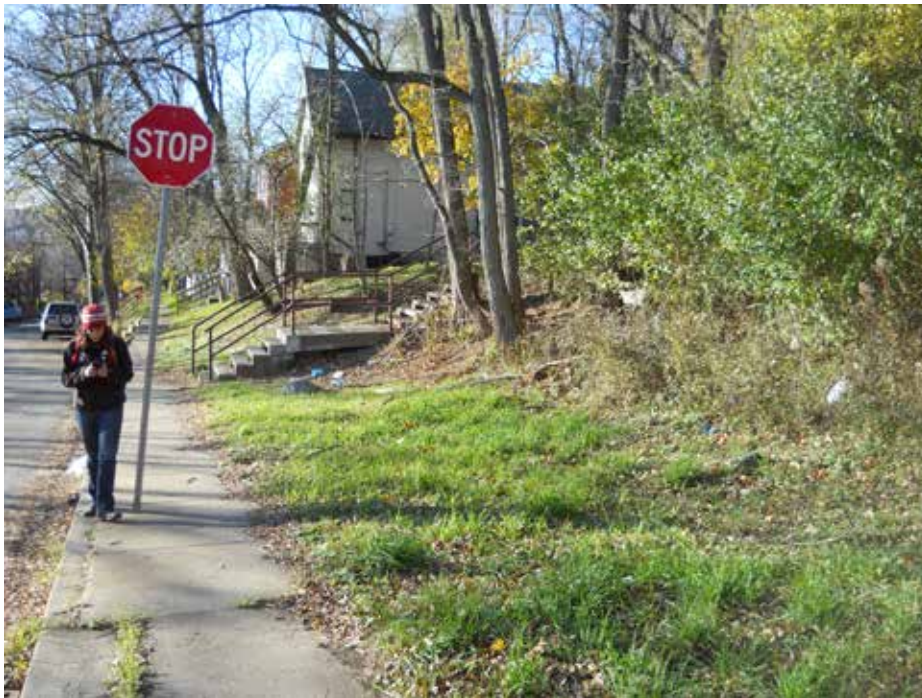
CONNECT THE PIECES: PEDESTRIAN ALLEY WAYS

Using existing alley ways connects the remaining community assets to the trail network and pulls all the pieces together.



TRAILSIDE DEVELOPMENT ZONES

There are many parcels along these connectors that can be put to good use by Garfield residents if they had access and/or control. Many of these have long been vacant and have unfortunately been neglected for myriad reasons over the years. Instead of continuing to harbor trash and invasive species that provide little ecological, recreational or agricultural value, they could be utilized for projects that promote health and recreation for the neighborhood. Contiguous plots could be used for long term projects such as fruit orchards or community vegetable gardens, small parklets to gather, safe natural places for the children of the neighborhood to play, or simply places to relax and enjoy the views of the surrounding neighborhoods, or the immediate woods itself. When focus is placed on this corridor, the projects are limitless provided the capital and human capacity are invested.



Vacant lots along Rosetta Street at the bottom of the Winebiddle Street steps.

CONNECT THE PIECES TO CREATE AN AMAZING GREEN ZONE

WALKABLE STREETS

- + HILLSIDE TRAILS
- + PEDESTRIAN ALLEYS
- + TRAILSIDE DEVELOPMENT ZONES





Playground at the Former
Fort Pitt School.

PRESERVE + PLAY

Acquire properties as they become available to create contiguous greenspaces and high quality recreation areas.

FORT PITT PARK EXPANSION

One of the existing green assets that was only briefly mentioned thus far that sits at the western side of the Garfield Green Zone is Fort Pitt Park. Officially, the Park consists only of the Ballfield adjacent to PPS's former Fort Pitt Elementary building. Various sources (e.g. Google maps) also represent Fort Pitt Park as comprising the Housing Authority property that contains the playground behind the school, as well as surrounding the school. Formally, these amenities are on Housing Authority or PPS land, but there are no visible boundaries or barriers at the site marking the various ownerships.

Fortunately, Pittsburgh City Planning designated Fort Pitt Park on the list for expansion as part of Open Space Strategy C, meaning, according to its definition in the Open Space plan, to "acquire property to expand an existing park or open space, or expand a potential relocation site. Areas for expansion can include City property and vacant properties in tax delinquency of two or more years." Fort Pitt Park is in a prime position to expand, given the list of vacant, adjacent properties on the next page.

The current park property highlighted in yellow in the chart (see next page) is Fort Pitt Park. The listing in green is the Housing Authority, which contains the playground and ball court as well as the first trail loop. The additional 23 properties are publically owned or delinquent. If these properties could be combined to comprise one single park, its size would triple in size from 3.79 acres and one primary purpose, football, to approximately 11.5 acres and many opportunities to enhance the Green Zone.

Property at the end of Shamrock Way into the woods below Fort Pitt Park.



BLOCKLOT	ACREAGE	PROPERTY OWNERS	Property Address
50-F-270	0.11	Blanton William & Yvonne M (W)	N Mathilda St
50-F-213	0.07	City of Pittsburgh	Hillcrest St
50-B-1	0.07	City of Pittsburgh	Breesport St
50-F-288	0.1	City of Pittsburgh	Breesport St
50-F-289	0.08	City of Pittsburgh	Breesport St
50-B-46	0.05	City of Pittsburgh	Breesport St
50-F-191	1.32	City of Pittsburgh	Hillcrest St
50-F-265	0.09	City of Pittsburgh	Hillcrest St
50-F-266	0.09	City of Pittsburgh	Hillcrest St
50-F-264	0.29	City of Pittsburgh	Hillcrest St
50-F-190	0.05	City of Pittsburgh	Hillcrest St
50-F-260	3.79	City of Pittsburgh	Hillcrest St
50-F-171	0.06	City of Pittsburgh	4905 Rosetta St
50-F-174	0.15	City of Pittsburgh	Rosetta St
50-F-278	0.52	City of Pittsburgh	N Mathilda St
50-F-277	0.07	City of Pittsburgh	616 N Mathilda St
50-B-49	0.09	Hinton Carol & Thomas Hinton	4939 Breesport St
50-C-350	4	Housing Authority City of Pittsburgh	Schenley Ave
50-F-269	0.14	James George W Jr	Hillcrest St
50-F-187	0.05	Jones Phillip H & Lulu D (W)	Hillcrest St
50-F-216	0.05	City of Pittsburgh	5100 Hillcrest St
50-B-47	0.06	Urban Redevelopment Auth of Pittsburgh	Breesport St
50-B-45	0.06	Urban Redevelopment Auth of Pittsburgh	Breesport St
50-F-276	0.06	Urban Redevelopment Auth of Pittsburgh	614 N Mathilda St
50-F-275	0.06	Urban Redevelopment Auth of Pittsburgh	N Mathilda St
50-F-145	0.05	City of Pittsburgh	Rosetta St
50-F-144	0.05	Urban Redevelopment Auth of Pittsburgh	Rosetta St
50-F-147	0.06	Urban Redevelopment Auth of Pittsburgh	Rosetta St
50-F-148	0.07	Urban Redevelopment Auth of Pittsburgh	Rosetta St
TOTAL		11.71	



Hillcrest Park along Hillcrest Street between Elora Way and N. Aiken Street.

The City of Pittsburgh is currently not looking to divest any of the properties surrounding Fort Pitt Park, and has instead tagged many of these properties for greening. City Planning has stated that if the community petitions the Director of City Planning to identify and add specific properties to the Park, it could become so.

The Housing Authority owned playground property and hillside will need additional work. As of this writing Councilman Ricky Burgess has pledged to ask for property use on behalf of the community. With the will of the community and a transfer plan in place, it is sensible to incorporate this property into Fort Pitt Park since there are no other buildings or structures on it, and the recreation amenities are cut off, currently, from the adjoining Housing Authority properties, due to topography. This could be done formally through a transfer of land to the City of Pittsburgh or by a long-term land use agreement between the City of Pittsburgh and the Housing Authority designating the land for use as a public park.



Playground behind Fort Pitt Elementary School adjacent to Fort Pitt Park. This property is not technically part of Fort Pitt Park; it sits on a Housing Authority property.



Basketball courts behind Fort Pitt Elementary school adjacent to Fort Pitt Park. This property is not technically part of Fort Pitt Park; it sits on a Housing Authority property.

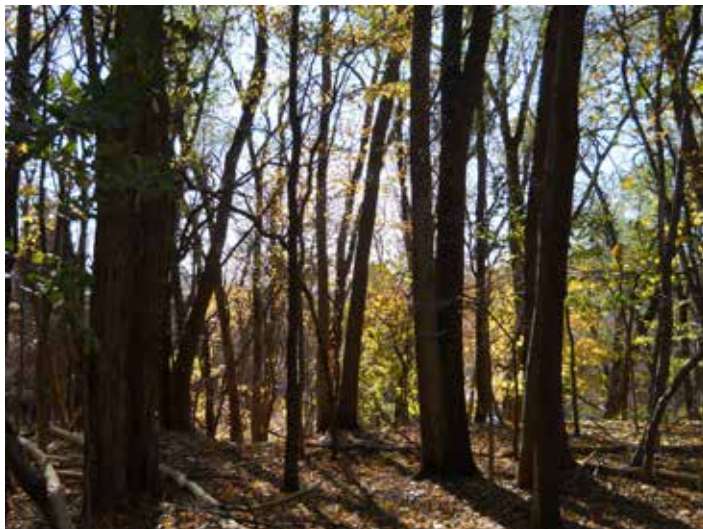
Mossfield Property

City-owned property called the Mossfield Property between Mossfield Street and N. Mathilda Street.



The Mossfield Property 50-E-167 is a large commercial vacant City-owned property along Mathilda Street covering nearly 4.5 acres. Roughly two-thirds of it is relatively flat with access from Mathilda Street, surrounded by relatively steep slope along the west and southwest facing sides. It has been in City possession since 1950. Neighbors use this space for bird watching and have counted dozens of different species in recent seasons. They have also put actual design plans to paper on how this property could benefit the community without losing its natural integrity. It is located at the far end of the neighborhood and is separated by the other contiguous land that surrounds Fort Pitt Park. The property has a “hold” tag for development and the URA will be placing a “hold for URA” tag on it in order to conduct development studies.

There are current opportunities to use this property in the short-term such as the City Planning Adopt a Lot program that would allow residents or organizations to use the space for up to a three year lease, with the requirement to vacate within six months should ownership change hands or if development were to take place. Should the community desire to preserve this property, it seems apparent that there will be roadblocks ahead. City Planning did indicate that it would not consider this property as part of the Fort Pitt Park expansion.



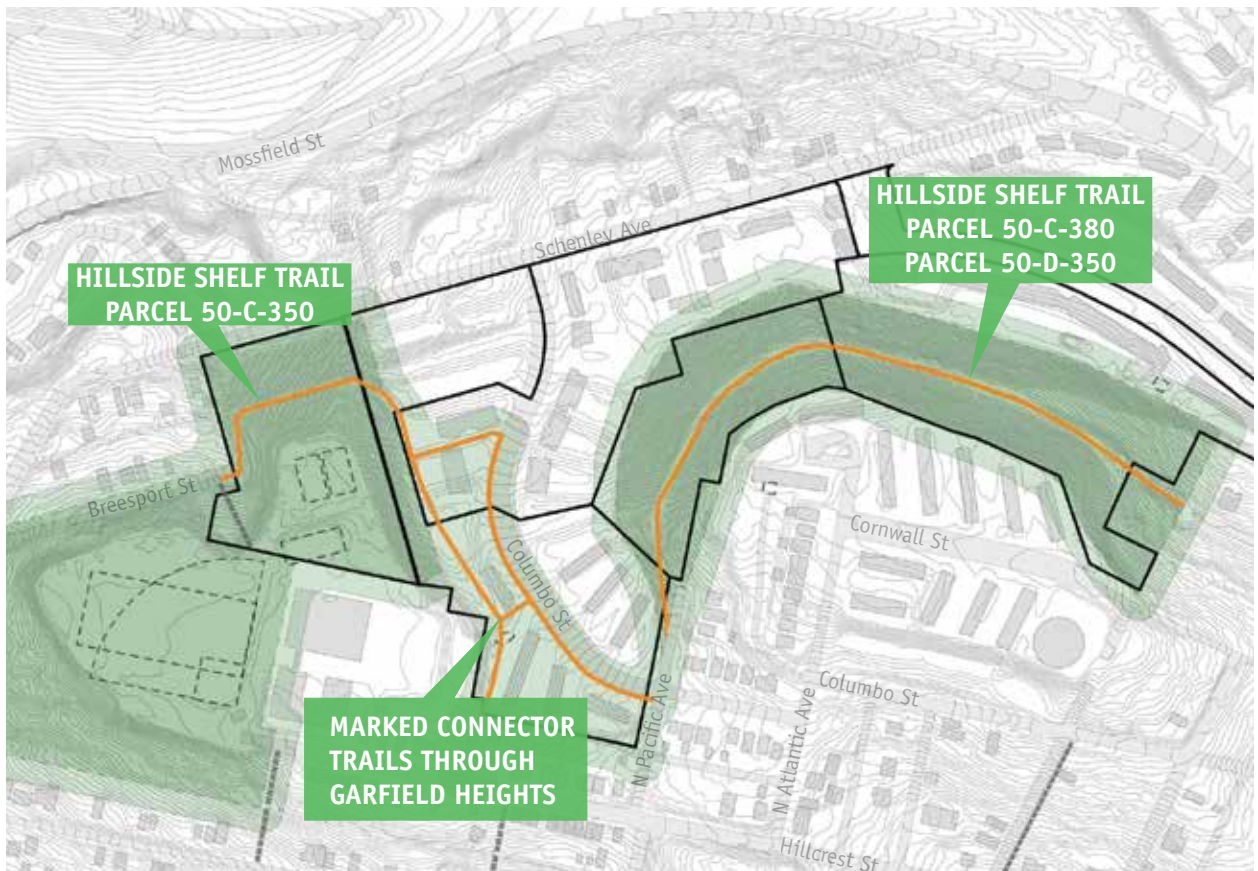
City-owned property called the Mossfield Property between Mossfield Street and N. Mathilda Street.

Housing Authority Properties

Property 50-C-350, the property with the playground and ball court on it, was address in the previous Fort Pitt Park expansion. Properties 50-C-380, with pedestrian access where N. Pacific Avenue ends (and no building structures on it), and 50-D-350 are the Housing Authority properties that make the second loop, connecting to Warble Street. Combined, these properties include 12.1 acres of land, though much of this is steep hillside, and property 50-D-350 contains many housing and other building structures facing Fern Street. Permission to use these properties is essential to making the broad community trail connections, but it does not seem necessary to have ownership possession in order to implement a trail along these properties. The task to obtain these properties could prove very difficult given the entities involved, but continued conversations with Councilman Reverend Burgess about permissions to access the property to build a trail should prove beneficial since the Councilman seemed amenable to the idea on behalf of the Housing Authority.



Path along Housing Authority property.



ACQUIRE + PLAN

Acquire properties as they become available to create contiguous green areas for potential trailside development or parkland.

There are many vacant properties throughout the Green Zone that are owned primarily by the City of Pittsburgh, but also by the URA, Bloomfield-Garfield Corporation, or other local non-profit organizations. These properties offer opportunity for green linkages to other community assets and can provide space for neighbors to use in a publicly beneficial way. In all there are more than 140 vacant lots in the Greenzone owned by the City of Pittsburgh, the URA, Allegheny County or Bloomfield Garfield Corporation. The properties suggested for Port Pitt Park expansion, and those that are part of Kite Hill Park, Housing Authority properties and Garfield Community Farm were not included in these totals.

When it appears advantageous to do so, the Garfield Community can work with land preservation experts such as Allegheny Land Trust to attain properties ensure these properties will remain green in perpetuity. ALT to add to the Green Zone, and manage through a local group, or it may decide to purchase properties outright as BGC or a new entity, if it has the organizational capacity to do so.

Many of these properties are better suited for low impact green development than housing or other building development because there are many impediments such as undermining and/or steep hill gradation. Targeting these properties will also help strengthen the ties between the larger assets within the Green Zone.

It is possible that in the future the City of Pittsburgh's Greenway program will be of use. It will be undergoing policy changes beginning in 2016 to adapt to the current situations Pittsburgh land use is in. The laws to designate a greenway were created in 1980 have not changed. As it stands now, greenway designation only allows minimal access opportunities: sanctioned trails and non-permanent sitting structures may be allowed.

At this time, the City does provide an opportunity for residents and groups to use City-owned property for agriculture purposes through its Adopt-A-Lot program. Through an application process through City Planning, individuals or groups may be approved for either an Adopt-A-Lot Lease (up to three year vacant lot usage agreement) or an Adopt-A-Lot license, granting lot use for up to one year with opportunity for renewal. Use on these properties includes edible gardens, flower gardens and rain gardens. Limited other uses are also allowed, including beekeeping.

This process, enacted in 2015, provides a process for people to utilize publically owned vacant lots, but is limiting in that the agreement period is not long-term, and should another party want to buy a parcel that has an Adopt-A-Lot license or lease agreement associated with it, the user will need to vacate the property within 90 days.

More information on this process can be found here:

<http://pittsburghpa.gov/dcp/adoptalot>.

CHALLENGE: LOT OWNERSHIP IN THE GREENZONE

- City of Pittsburgh
- Urban Redevelopment Authority
- Bloomfield-Garfield Corporation
- Pittsburgh Board of Education
- Garfield Jubilee Association
- Maria Graziani / Healcrest Farm
- Hillcrest Community Center Corporation
- Housing Authority of Pittsburgh
- Open Door Church / Garfield Community Farm
- Veterans Affairs
- YMCA of Pittsburgh
- Tax Delinquent



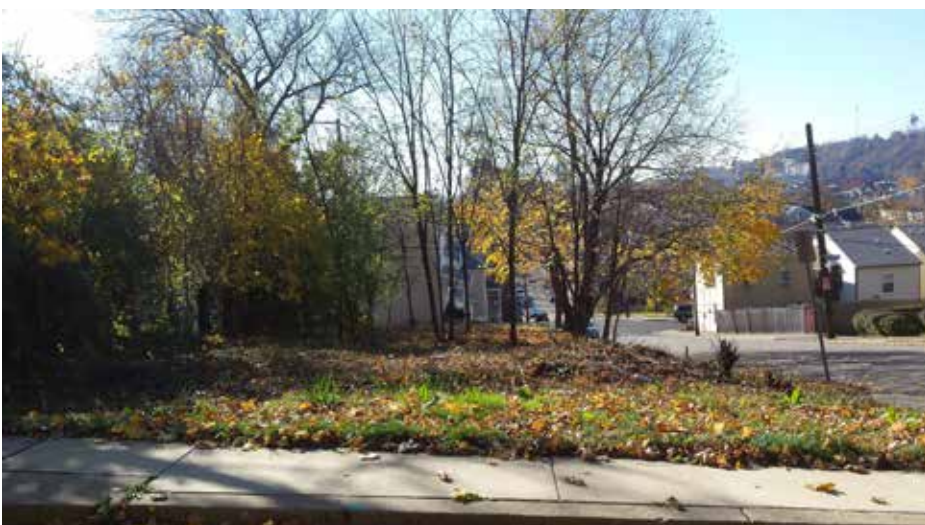




Playground made with naturally found wood and elements. Prospect Park, Brooklyn, NYC.
Photo: G. Deming.



Volunteer activity at a community vegetable garden in Homestead.



There are many vacant lots within the Greenzone that have potential for new



A freshwater spring near Shamrock Way.

RESTORE + REBUILD

Fill in the gaps and provide quality, affordable housing as outlined by the Garfield 2030 master plan.

As a Green Zone develops, it is important to plan for smart development around the Green Zone. The point of the green zone is to serve current neighbors and Garfield visitors, but it is advantageous to BGC and the community to identify locations for development to complement the greening that will occur with the Green Zone.



Development Policy Map,
Garfield 2030 Plan.
Perkins Eastman, 2010.

Residential Mixed Use Multi Unit Civic Parks Green

GARFIELD GREEN ZONE RECOMMENDATIONS

Bloomfield Garfield Corporation and Garfield residents have an opportunity to make something both great and unique in the area of its community that has long been underdeveloped and neglected so that renters and homeowners, new homesteaders and longtime residents may all enjoy assets that are common to them based on proximity. Over the course of the past two years, the excitement by Garfield neighbors to see land set aside for community use and health in subcommittee and public meetings is palpable. The designated Green Zone is unique because it covers such a wide swath of the neighborhood, yet remains squarely within the borders of the neighborhood.

The following recommendations are based on these conversations and what we believe are general desires of those who have participated in the process, tempered with the pragmatic realities of the situation. The recommendations will approximate costs as known as well as the energy that will be needed to make it happen.

OBTAIN LAND USE PERMISSION

Land possession options have been addressed in previous sections. Ultimately there are three different options for land use in the Green Zone. They do not have to be mutually exclusive and indeed all may need to be used at one point or another to be able to use land in the Green Zone:

1. Obtain permission to use property as the community desires without changing owners. This is not necessarily a long-term solution unless the space is designated parkland, such as Fort Pitt Park or a designated greenway. There are a few different ways to make this a reality, based on who the property owner. If the owner is an organization or private owner, written permission and an agreement should suffice. If the property is owned by the City of Pittsburgh is owned by the URA, though, individuals or BGC (or some other organization) must take the process through the Adopt A Lot process, using the methods found in the Vacant Lot Tool Kit, found here: <http://pittsburghpa.gov/dcp/adoptalot>. This process is outlined in more detail in the previous Acquire and Plan section.
2. Utilize a third party to purchase the property for the express purpose of using for a green way but develop a system for managing the properties, either as a program of Bloomfield Garfield Corporation, or as a new organization or group, such as "Friends of Fort Pitt Park." In this situation.
3. Buy the desired properties for protection from the City and manage them. This could be accomplished by the Bloomfield Garfield Corporation or by some other group, such as a new land trust.

Fort Pitt Park Expansion

Since the City of Pittsburgh Planning department made it clear that its intention is to keep Fort Pitt Park (the act of selling off property that is designated parkland is apparently a very cumbersome process), and its Open Space plan suggests that it expand, which gives residents from Garfield the opportunity to petition the City to make this a reality. The adjacent properties suggested for expansion are listed above in the Preserve and Play section.

In addition to bringing this request to the City, BGC ought to create a new committee, or perhaps support the formation of a new organization, that will drive the expansion process and help manage the parkland, and perhaps additional green spaces in the Green Zone in the future. As organization around Fort Pitt Park takes shape, it is important to incorporate stakeholders such as leaders from Garfield Gators, an organization that already formally uses the park, as well as adjacent neighbors that interact with the wooded space. The City of Pittsburgh has used an Adopt A Park process that allows local community groups the right to help manage parks in a way that Pittsburgh's Department of Public Works cannot.

Section 139.03 of Pittsburgh's municipal code states, regarding an Adopt-A-Park volunteer program:

The Director of the Department of Parks and Recreation ("Director") shall establish an Adopt-A-Park Volunteer Program ("Program") within the city, whereby various persons (as defined within § 101.03(a)(16) of this Code) may volunteer their services to improve and maintain City parks, playgrounds, ball fields, courts and other facilities owned and/or operated by the Department. In connection therewith, the Director shall have the following powers:

- a) To enter into an agreement or agreements, in form approved by the City Solicitor, with a nonprofit organization or organizations, to develop, implement and coordinate the Program;
 - b) To adopt rules, regulations and forms for registration of persons desiring to volunteer their services for the Program; and
 - c) Upon registration and approval of all required forms, to enter into an agreement or agreements, in form approved by the City Solicitor, with any persons who shall provide volunteer services under the Program.
- (Ord. 9-1992, eff. 4-3-92)

It would be wise to pursue either a master plan to address the overall strategy of the park function, setting the groundwork for how the space is used, or at least a trail plan to set a course of action for formal trail implementation and use throughout the Green Zone once Fort Pitt Park has expanded.

To develop a master plan for a park the size of Fort Pitt Park could cost up around \$35,000, but a strategic trail plan might seem more reasonable at the outset and run around \$15,000 to conduct. BGC and/or separate entities will need to fundraise in order to make this a reality, but they should push the City first to make the expansion a reality. The City of Pittsburgh does have examples of master plans for other designated community parks such as Wightman Park in Squirrel Hill and Armstrong Park in the South Side Flats that have recently been undertaken.

Mossfield Property and Other Vacant Properties

BGC and other Garfield residents can obtain short-term permission to use vacant City of Pittsburgh and URA to implement their own greening projects as noted prior. This process is encouraged but BGC should continue to plan for specific lots that it would like to see acquired in a comprehensive green zone plan and strategy. Allegheny Land Trust will likely play a key role in this process. Allegheny Land Trust can be important because as a land trust, their mission is to hold land in perpetuity for green use. They do not necessarily have to manage the land, though, and would likely prefer to enter into an agreement with a local group to take care of the properties instead.

Garfield may also petition the City to make contiguous strips of land into a greenway, that is City-owned land that is never to be developed, but at this time we advise against this strategy, as greenways allow no formal implementation. As noted before, this will likely change in the near future as the policy definitions change, but as it stands now, it would be extremely limiting designation should the community desire to have active agricultural or recreational amenities in the Green Zone.

These acquisitions will need to remain a continual discussion with the public landowners, Councilman Rev. Ricky Burgess and City Planning in order to make land preservation a reality. Employing a regular working group, whether a committee of BGC or a separate recognized community group or formalized organization, it is imperative that this effort remains organized and consistent.

A little used but potentially significant approach to maintain property tax revenue is a tactic called Transfer of Development Rights (TDR). This might be beneficial when parcels are added to Fort Pitt Park. The development rights that are removed from these parcels can be added to other parcels within the neighborhood increasing the developable density on that parcel receiving the transfer. For more information on Pennsylvania's TDR legislation, see <http://conservationtools.org/guides/12-transfer-of-development-rights> and consult with Allegheny Land Trust.

DELINEATE TRAIL

As permission to use space progresses, the community should embark on a master plan for a trail system to draw the entire Green Zone together. This exercise, estimated at \$15,000 to undertake, will help formalize the Green Zone and draw in the greater community when known connections are made. BGC or other steward groups can begin to promote something tangible and keep pressure on the acquisition process.

DEVELOP A SUSTAINABLE TRAIL MANAGEMENT PLAN

Developing a sustainable trail management plan that provides a comprehensive vision and management framework should include broad stakeholder and public input, as well as engagement of trail design, construction and maintenance professionals.

The scope of the plan should include the following:

- Survey and evaluation of current and future trail usage
- Identifying nodes for making community connections to connect to a trail
- A plan for way finding signage and other outreach and educational assets
- Training and project management on trail construction and maintenance
- Plan for accessibility in compliance with the ADA



The beginning of the path on Housing Authority property at the end of Breeseport Road.

A loop incorporating the wooded area around Fort Pitt Park, Housing Authority properties, and using Elora Way and Hillcrest Street and Columbo Street as street connectors can create a loop spanning more than 1.5 miles with spurs at various locations connecting to the neighborhood all along the way. Much of the path is already capable of accommodating strollers or bikes and is relatively flat and already traversable.

Funding for planning and trail development is available through DCNR's Community Conservation Partnership Program (C2P2) grants. C2P2 grants cover fifty percent of overall project costs. Other project matching funds can include both cash and in-kind goods and services, including the value of volunteer time contributed by stakeholders and the public during the planning process.

Applications for the next round of C2P2 grants have not yet been announced; the last due date was in April 2016. More information on C2P2 grants can be found on DCNR's C2P2 website:

<http://www.dcnr.state.pa.us/brc/grants/c2p2programguidance/index.htm>

As Fort Pitt Park expands, it is likely that the Pittsburgh Parks Conservancy will be able to lend some technical support to the BGC or a Friends of Fort Pitt Park group in order to help bolster the overall sustainability of the parks system. Traditionally their focus has been on the large parks of the City, but in recent years, they have given more attention to small parks such as Arsenal and Lesli Parks in Lawrenceville, Allegheny Commons in the North Side and McKinley Park in Beltzhoover.

Trash Removal

Garfield residents have done an exceptional job cleaning Green Zone properties over the past few years both in formal events they organized with college students, and in informal events amongst neighbors. Because of the neglect of many of these properties over the years and their "hidden" nature, they have become a haven for dumpers. This space is also where blowing trash collects due to brush and thickets.

A large dumpsite off of Hillcrest Street near Fort Pitt Park into the woods below. Such a site could utilize the expertise and capacity of Allegheny Cleanways.



As the community takes more ownership over these spaces, we believe that trash accumulation will reduce organically with an increase in care and use, but there still remain large heaps of trash that may well have been there for decades. We recommend that BGC reaches out to and partners with Allegheny Cleanways and their DumpBusters program to address large dumpsites still found throughout the Green Zone, especially in the area between Hillcrest Street and Shamrock Way to the east of the Winebiddle St. steps. These locations need a little more capacity and expertise for trash removal. The DumpBusters program provides expertise to communities wanting to clean up difficult sites, assists in large events by doing prep work and/or returning to the site to finish the job, and is readily “on call” to respond to new dumping incidents.



A large, long-standing dumpsite in the woods beyond Shamrock Way in the Garfield Green Zone.

Residents that are passionate about trash removal, especially ones that choose to participate in a working groups focused on the Green Zone, can become an Urban EcoSteward, a project of Allegheny Cleanways, by adopting a small section of land to correct problems that might exist on the site, as well as to prevent re-dumping and litter accumulation. An Urban EcoSteward receives one-on-one training on the site they have chosen to steward and attend free group trainings on relevant issues. Training workshops cover such topics as invasive plant identification and removal techniques, wildflower identification, erosion control, native shrub and tree identification, native seed collection, and techniques for leading a crew of volunteers.

As a partnering non-profit, BGC can help Allegheny Cleanways fundraise to focus impactful efforts on the Green Zone.



A small dumpsite along the street in the Garfield Green Zone.

Invasive Species Management

Due to years of neglect and the natural progression of urban vacant lots in Pittsburgh, the Green Zone has myriad invasive species habituating the landscape. Knotweed, Japanese stilt grass, Oriental bittersweet, English ivy, honeysuckle, ailanthus and others are prolific detrimental to trees and any native plant species existing in the Green Zone. Other vines such as poison ivy and grapevine that are native species to the area have taken on invasive tendencies due to the disturbed landscape and pose a dangerous threat to the trees and pose a liability to anyone on or near these properties.

Invasive vines hang from large trees the Garfield Green Zone in early spring.



We recommend that Garfield residents work with environmental organizations such as the Western Pennsylvania Conservancy, Tree Pittsburgh and others who have expertise on plant identification and vine removal. As a “Friends” group takes shape, tool investment would also be worthwhile expenditures. Quality pruners, gloves, shovels, hardhats, goggles, machete and a chainsaw would all be good items to have in the toolbox. Much like a community trash cleanup, having designated vine removal events would also promote the health of the Green Zone.

Pittsburgh does have an exciting new organization called Landforce that aims to help Pittsburgh’s nonprofit community, municipalities, and agencies restore and maintain land and green assets by providing professionally skilled crews who can assist in environmental management. Landforce could be a potential partner to help clear invasives, brush, as well as implement a trail once a design is in place. Landforce provides services to nonprofits or municipalities for \$4,000 per week or \$800 a day with six adult crew members and one crew leader.

Invasive vines cover invasive ground cover in a publically owned vacant lot between Rosetta Street and Shamrock Way in the Garfield Green Zone.





Invasive vines covering mature trees in the Garfield Green Zone. This could become a dangerous situation as these vines can kill and pull down large trees.

In an effort to track invasive species in the region through identification and management, interested parties could become acquainted with the iMap Invasives program, found online at www.imapinvasives.org, a national database for tracking species and efforts to reduce their numbers.



The Heritage program at WPC manages the Pennsylvania portion of the system. Staff could train interested participants to be able to utilize the system. Training sessions could include: Plant ID, Documentation and management tracking using iMap Invasives, Mechanical treatment methods and Chemical/herbicide treatment methods. Full costs for these trainings are approximately \$1,800 to \$2,200 per day.

Passive Seating

In order to invite residents of different abilities into a green zone, it is important that amenities exist to allow pause and rest. Many users will no doubt have physical capabilities to tread through the neighborhood, both on flat paved alleyways and contoured trails, but either way, providing benches promotes more use and better delineation of the whole space. It also provides users the opportunity to sit and enjoy their surroundings. One specific location that would make for a nice sitting and contemplation area would be at the City-owned lots 50-F145 and 50-F-144 on Rosetta Street on the east side at the bottom of the Winebiddle Street steps. There is ample space off of the sidewalk for multiple benches to populate the space.



Park bench in Boyce Park,
Allegheny County.

Benches can range in price and style. There are many metal benches with a wide variety of style and cost ranging anywhere from \$200 to well over \$1,000 per bench. For most greening projects WPC has undertaken in recent years, it has utilized local company Urban Tree that makes large wooden benches from found wood. These are strong and uniquely shaped, and blend well into the surroundings. Benches cost about \$400 to \$550.

Provided that benches are not implemented with permanence, cemented into the ground, they are permitted in the City of Pittsburgh's Adopt A Lot programs and therefore implementation within City-owned lots throughout the Green Zone should be relatively simple to achieve.



Urban Forge made benches
for a community vegetable
garden in Homewood.

Lighting

Safety is of utmost importance for a formalized community project, and lighting may be necessary in some locations of the pathways of the green zone. It is important in general that street lighting exists on roadways, but lighting should be a consideration for trails as well in some locations. Thanks to the advocacy of neighbors, there is lighting at Fort Pitt Park's ball field, but it does not exist any point in the woods, neither around Fort Pitt Park, nor on the Housing Authority's properties.

New lighting could be expensive. A new solar-powered light can be \$3,500 for the light and \$1,000 for installation. Lighting is not required for wooded trails in City paths, but it does add a level of safety when possible.

Interpretive Signage

Interpretive signage accompanying any new projects or park management change is a high priority because of the importance of having public understanding and support, and in some cases to provide environmental education, especially throughout the Green Zone.

Signs range in price depending on size and materials but range from \$300 or less for small signs used along trails to \$3,000 or more for larger kiosks that are good for posting maps and public notices, such as at trail heads.

The City of Pittsburgh and the City Parks have very specific signage for very specific usage. In 2015 City Planning underwent a signage standardization process that was ratified by City Council in early 2016. All public projects will be subject to these standards.



Approved standard sign design for Pittsburgh Public parks (left) and for privately-owned public space.

TREE RESTORATION

Street Tree Plantings

In the Tree Analysis section, we went into detail about tree planting opportunities for Garfield. We recommend the TreeVitalize Pittsburgh route to implement trees. The process is subject to the process timeline, and there is no guarantee that because a group applies they will be rewarded trees. Even so, each tree that is selected is hand-selected by TreeVitalize staff, and is selected specifically for the location it is to be planted. Also, since the residents are the ones to plant the trees, we find the trees have a much higher survival rate. The participants take pride in the investment they make and want to see the trees thrive. In addition, since Public Works is a partner in the project, the implementation of the trees has been approved.

Should Garfield residents want to purchase and approve their own trees, we still strongly recommend getting advice and approval for the planting.

Landscape trees refer to trees planted within managed areas of parks and open spaces and are associated with facilities and buildings as part of the landscape. By WPC's community forestry standards, these trees are a minimum of two-inch caliper (diameter of the trunk at the base of the tree) and typically stand up to 15 feet tall at the time of planting. The trees are balled and burlap (B&B) which means they are excavated at the nursery in such a way that they have a root ball that is then secured with natural burlap and a wire cage. These trees are used by WPC as park, trail, and street trees through their community forestry program because they can withstand urban conditions, including contact with people that could damage smaller trees. Landscape trees have significant and measurable environmental, economic, and aesthetic benefits for the built environment including energy savings, stormwater control, wildlife habitat improvement, and increases in property values.

To put these projects into perspective, the high caliber tree planting can costs a lot outside of the TreeVitalize program to residents and groups:

- WPC Forestry Consultation: \$50/hr
- Volunteer tree planting event coordination: \$50/hr
- 2" Caliper landscape trees: \$200 each
- Mulch, stakes, tie, protection: \$25 per tree
- Open site preparation (excavation, backfill): \$250 per tree

WPC begins the tree planting process by conducting planting site assessments. The project forester identifies optimal planting locations using WPC's community forestry specifications which include considerations for proximity to buildings, roads, and utilities, species diversity, and other site conditions such as light exposure and soil conditions. Tree plantings occur in the spring and in the fall while the tree is dormant but the ground is not frozen. Once the planting sites are assessed and the species have been selected, the project forester hand selects each specimen from a local nursery. All of WPC trees must come from within a 150-mile radius of the City of Pittsburgh.

WPC staff can then begin planning for the planting event. As a rule, WPC recruits and trains volunteers to help with the tree plantings. Experience has shown that this helps ensure the long-term health of the trees since volunteer-planted trees under staff supervision are planted in a superior fashion to

contracted plantings using landscaping firms. Volunteer engagement also helps ensure that the community is invested in the project and better understands the value of the trees and how they should be maintained.

With all volunteer tree plantings, WPC has planting site preparation completed for each tree through contracted landscaping firms or with assistance from DPW staff. Because of varying soil and sub-surface conditions in urban and even park and vacant lot environments, it is essential to have the planting sites prepared in advance of the volunteer planting event. Relying on volunteers to hand dig the tree planting sites leaves too much to chance. Planting site preparation in “open sites” (open green spaces) includes excavating a hole 36” in diameter and 24” deep and backfilling to surface level with a specific grade of topsoil. When sites are prepared properly, WPC is able to time planting events with surprising precision.

In addition to a well done planting, maintenance is essential for the successful establishment of these trees. WPC provides community members with a maintenance plan for the trees that includes guidelines on watering, weeding, mulching, and protecting the trees over the first three years. We will also provide guidance on training pruning that should occur between years 3–5.

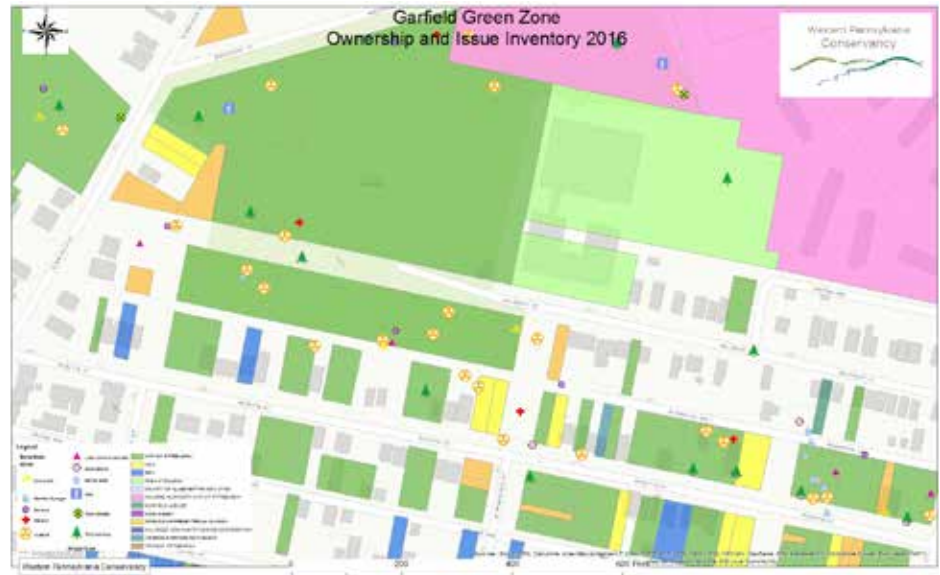


A happy TreeVitalize volunteer during a Garfield tree planting.

Restoration Tree Plantings

Restoration trees are trees that are used to reforest areas that have been affected by invasive plant species, diseases, or pests. These trees are considerably smaller than landscape trees because they are typically planted in locations such as hillsides and stream embankments where transporting a very large, heavy tree would be extremely difficult. Restoration trees range in size from 12” bare root seedlings to moderately sized plants grown in containers and can usually be handled by one person.

Though not as common, this is a strategy that TreeVitalize has employed for community tree plantings and will be a good strategy once the woods around Fort Pitt Park has been further cleaned of trash piles and invasive vines. Below is a map with suggested locations for restoration plantings.



The goal of restoration tree plantings is to reforest an area that has lost trees to previous land uses, forest pests and diseases, resource extraction, or where invasive plant species are actively being removed or controlled. In any of these approaches, the strategy is to plant a suite of native trees that will over time out-compete invasive species and restore the native tree canopy. The benefits we seek are much the same as landscape tree plantings, but with more focus on restoring forest habitat. The shade provided by a restored canopy helps prevent the growth of invasive plant species that typically prefer growth in canopy gaps.

Once the area for restoration has been identified, the WPC forester and arborist will assign a suite of native tree species appropriate to the location. Planting restoration trees in this area will encourage better wooded health and, improving the bird species that come through and making the user experience of these woods more enriching. Restoration plantings occur in much the same way through TreeVitalize as street tree plantings occur.



Volunteers plant restoration trees in a large city-owned lot in the Perry South neighborhood.

DEER EXCLOSURE FENCING

Deer manage to eke out a prolific existence in spite of all of the human development and activity in urban and suburban landscapes. Their density is extremely high and they enjoy browsing on nearly any plant they come across, especially vegetation that is traditionally part of their diet. In order to give native and relatively rare vegetation a change against deer, installing deer exclosure fencing is a highly effective and relatively simple to implement way to protect sensitive botanical areas from browsing deer. With a small amount of training and instruction and using mostly hand tools, residents could begin to install fencing as soon as funding is available and sensitive areas are located. This could be a good strategy to help protect newly planted restoration trees or to grow native wildflowers that help promote ecological health. Exclosure fencing could also spark education and care opportunities in the Garfield Green Zone, as well as promote activities that have been discussed in various meetings, such as wild edible plants.

Interpretive signage, if possible, should be a component of a new deer exclosure project. The fence may appear unfamiliar and obtrusive to some residents, but signs explaining the reason for the fence (to prevent deer from eating native plants) and directing users to hiker-access gates or openings. For estimated costs to install interpretive signage, see the following recommendation.

The estimated total cost to install deer exclosure fencing is approximately \$5.00-\$5.50 per foot based on installing an 8ft woven wire fence with 12ft galvanized steel posts. Fence can and should be designed to allow hiking access without additional costs. A good local example of a deer exclosure fence that allows hiking access is along Trillium Trail in Fox Chapel. Gates for equipment access should also be installed, and are \$150-\$400 each depending on size. The estimated cost for project oversight and instruction to local residents at the initial demonstration project installation is approximately \$2,000-\$2,500.



Deer exclosure example at
Pierce Cedar Creek Institute,
Hastings, MI;
Photo: G. Deming.

STORMWATER CAPTURE

Portions of the Garfield Green Zone fall under the A-22 watershed. Pittsburgh Water and Sewer Authority (PWSA) has listed this watershed as a priority for reducing downstream combined sewer overflow (CSO). Each time there is a rain event in Pittsburgh that totals more than 0.1", sewage flows directly into the river. In addition, sewer backup is more likely.

PWSA offers annual grants to help address stormwater reduction, especially in targeted areas such as A-22. The City-owned properties between Hillcrest Street where the bottom of Fannell Street connects with Hillcrest, could be a prime location for a stormwater capture.

The following nine contiguous properties along Hillcrest Street are now all owned by the City of Pittsburgh or the URA, comprising 0.41 acres of land:

- 50-H-20
- 50-H-21
- 50-H-22
- 50-H-23
- 50-H-24
- 50-H-25
- 50-H-26
- 50-H-27
- 50-H-28

Block of city-owned properties on Rosetta Street in the Green Zone that would be a great location for intentional stormwater capture.





Bioswale installed by WPC on the edge of a parking lot in Millvale.
Photo: Matthew Little.

Although there are talks about private development on these lots, development would be costly. Stormwater capture site would be much more beneficial to the greater neighborhood at this point, if it were a space dedicated to stormwater capture. Rain gardens and bioswales are attractive and natural infrastructure that often reroutes water that falls during rain or snow falls and absorbs water into the ground rather than into our combined sewer system. As a result, less sewage flows directly into our rivers during a rain event of more than 0.1 inches, and less water is needed to be processed during these weather events.

Costs for engineering and landscaping design could come to \$30,000 and rain garden or bioswale construction could be up to \$75,000 per garden. A project of this magnitude will require professional engineering, landscape design and project management, but dedicated volunteers and/or staff can reduce costs for implementation and ongoing maintenance for the site.

Since this is a target location for PWSA, it would be advantageous to work with them, especially as they may have dedicated funds for this site or a site in a nearby location. Garfield will also need to work with the City in conjunction with PWSA to receive permission on site if BGC, ALT or another entity does not own it.

Volunteers remove debris as part of routine maintenance from a WPC-implemented bioswale in Millvale.





