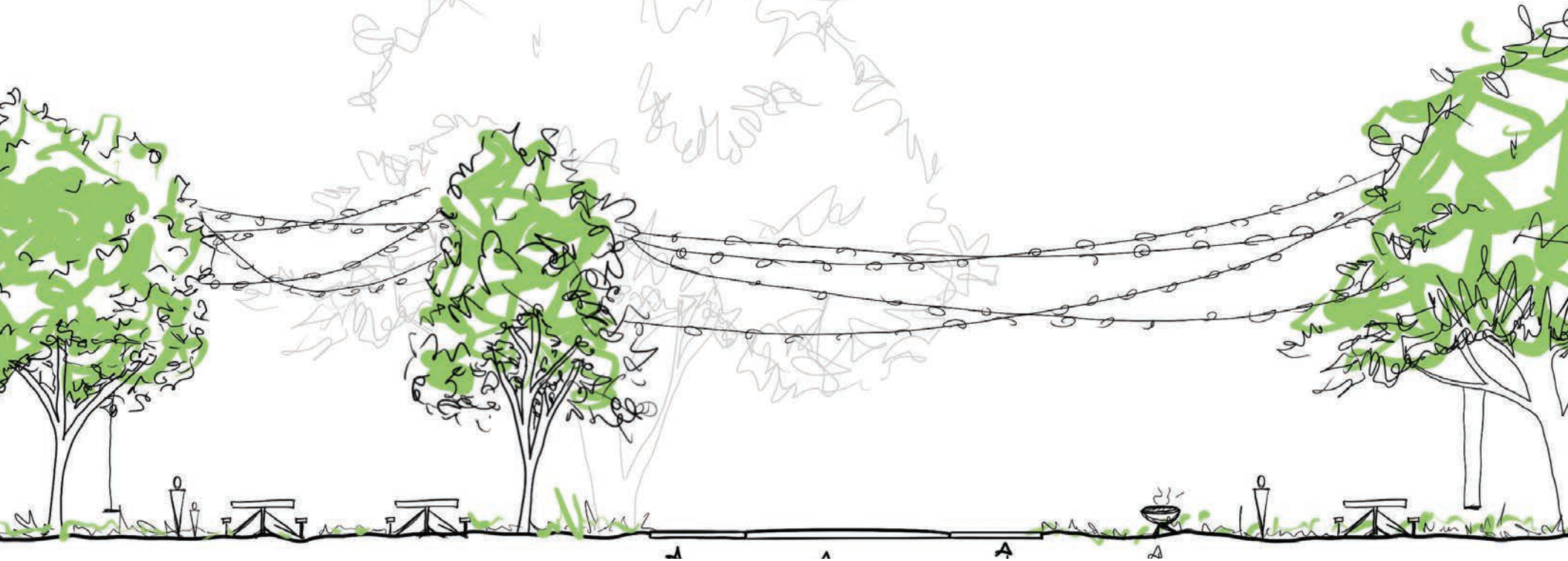
SEEDS *of* Renewal

Sprouting Sustainable Communities in Kingsessing's Vacant Spaces

By: Carolina Cassel Dürr



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NARRATIVE

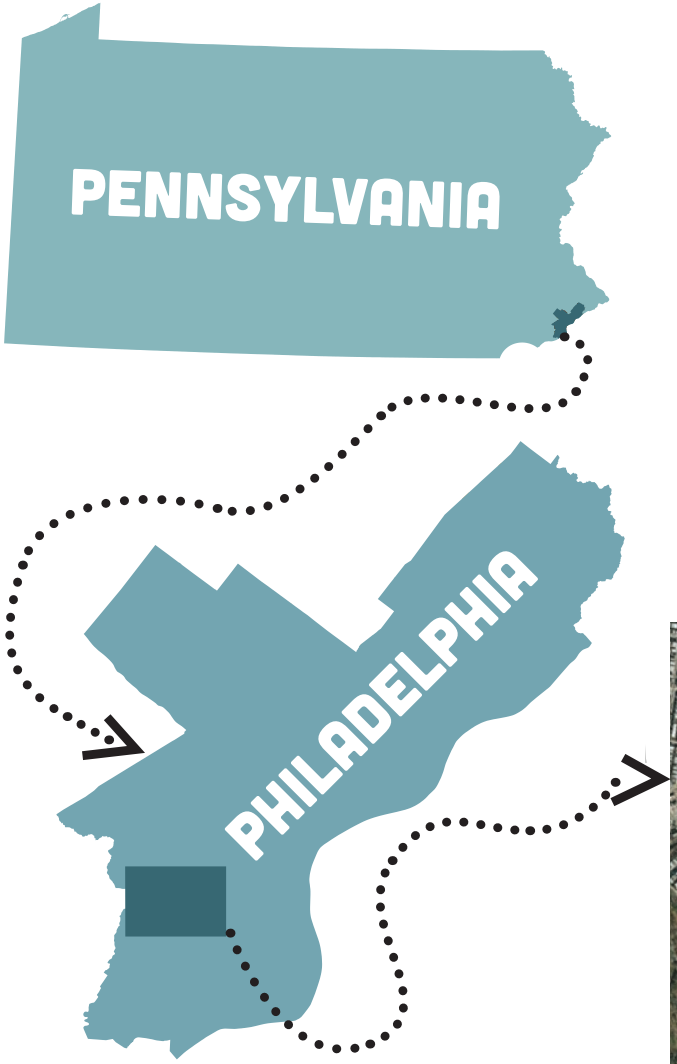
Passing through the streets of Philadelphia, its culture is vividly present through the people walking its streets and in some places it also shines through the forms that make up its building typology. Some of the history that has founded these cultures are strengthened and celebrated, while some are abandoned and forgotten. The latter is clearly seen in Southwest of Philadelphia, near Kingsessing. Crumbling buildings, littered dying lawns and masses of vacant lands line its streets. While these lands and structures have been long forgotten, their impact still affects the daily lives of the residents who call it home.

This project strives to sprout sustainable communities in vacancy filled neighborhoods by unearthing methods that will Cultivate Community Catalysts, Sow Sustainable Synergy and Boost Biodiversity.

Site

CONTEXT

Kingsessing neighborhood was primarily built before 1939, with some between 1940-1969.
Around 82.4% of real estate is considered to be rowhouses or other attached homes. There are 24,923 people per square mile living in Kingsessing.

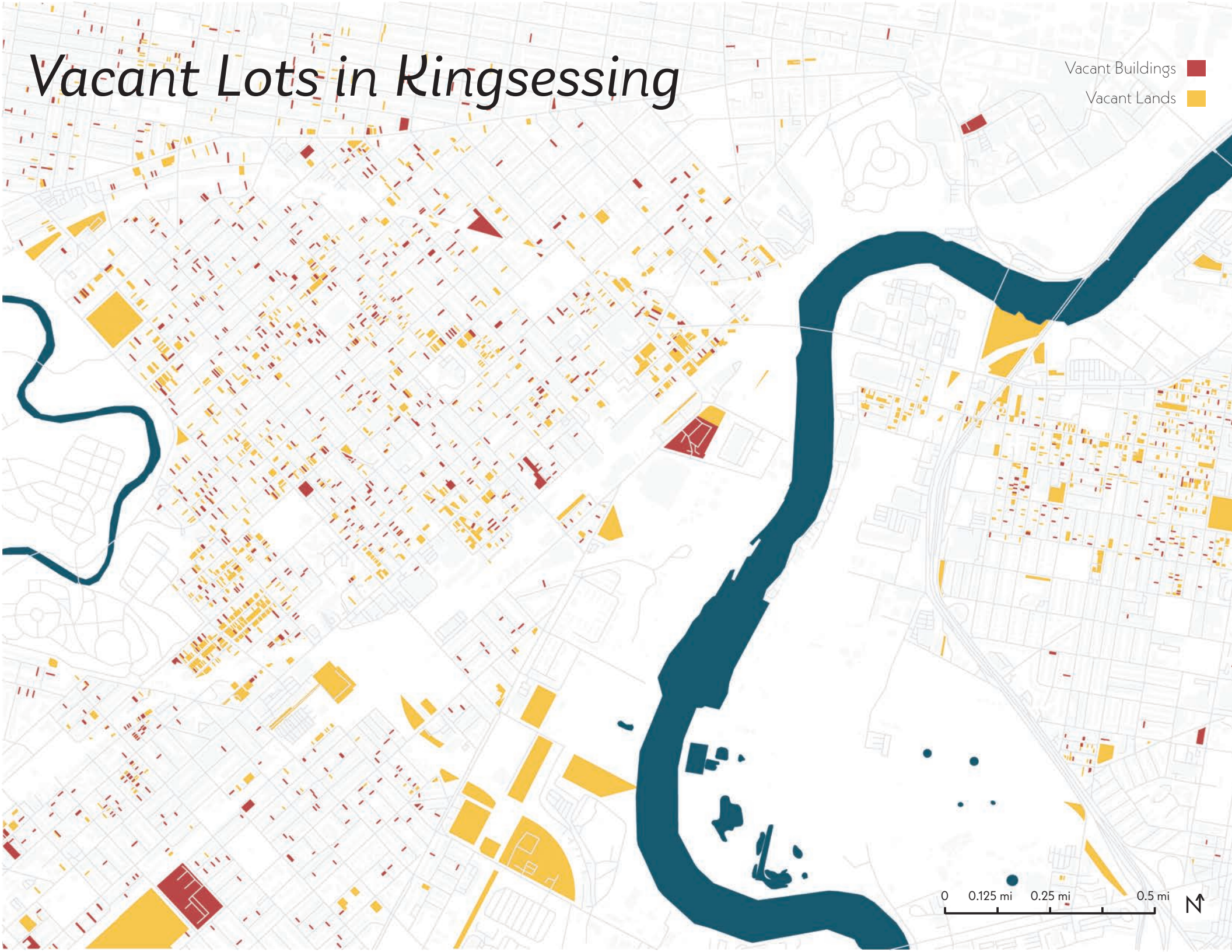


Kingsessing has a higher rate of vacancies than

92.3%

of all U.S. Neighborhoods

Vacant Lots in Kingsessing



Detrimental Vacancies

Vacant properties often require ongoing maintenance and security measures to prevent further deterioration and vandalism. These costs are typically paid by the local government or neighboring property owners, which places additional financial burdens on the community. If there are no maintenance efforts, neglected properties will deteriorate over time, leading to structural decay, water damage, and the potential for hazardous materials to be present. These conditions can pose health and safety risks to the community and require remediation efforts that have environmental implications.

SPECULATIVE INVESTIMENTS & LOWER PURCHASE PRICES

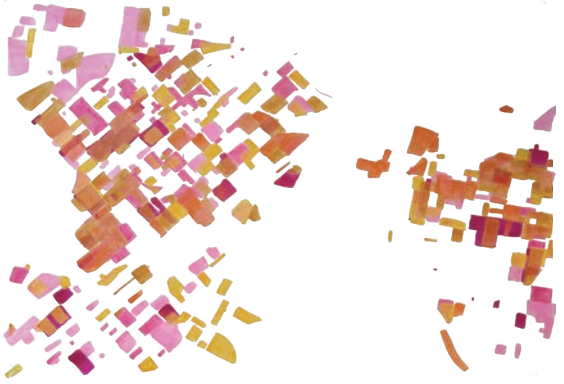
An accumulation of neglected properties can create a sense of blight, hopelessness and tear apart a community's cohesion. It negatively impacts the neighborhood's image and attractiveness, detering potential residents, businesses, and investors, which in turn worsens the disinvestment in the area and creates a cycle of decline. The presence of vacant or distressed rowhomes can lead to lower purchase prices. Lower purchase prices can attract investors or developers seeking opportunities for profit through renovation or redevelopment. These efforts rarely do any good for the existing community as it raises cost of living and causes displacement. This is called Gentrification.

Vacant Lands Inventory

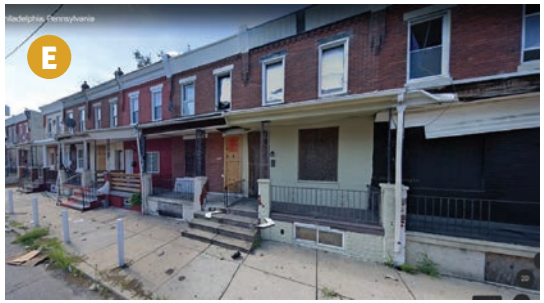
A mosaic displaying the concentrations of vacancies in Kingsessing. The darkest gradient blocks show areas where there is a large amount of vacant land and vacant buildings

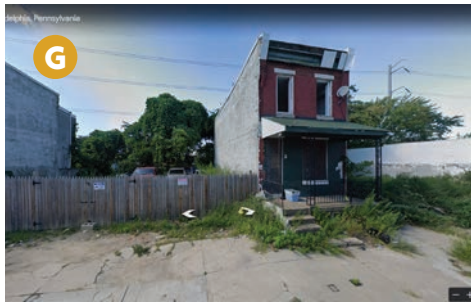
Vacant Buildings

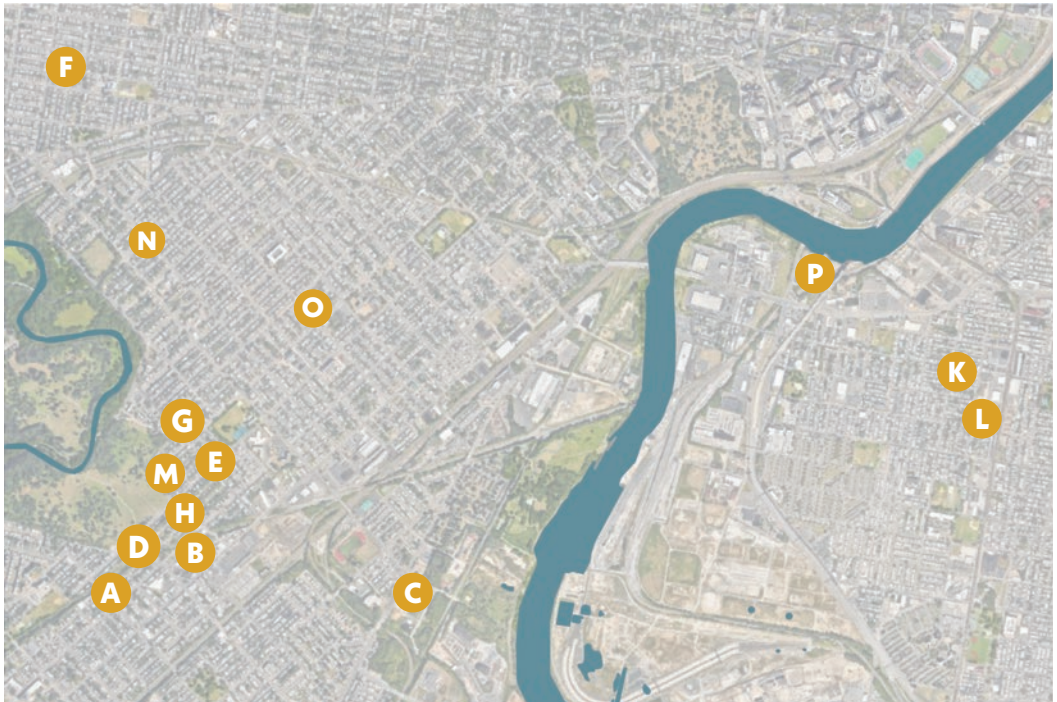
Vacant Lands



Combined







Google Streetview Images of Vacant Lots on site

Green Spaces

This inventory of existing green spaces and tree canopy, shows the uneven spread of tree canopy at the heart of Kingsessing and Grays Ferry. Even with the proposed trails, the area lacks accessibility to green spaces and connections to existing green spaces.

- Special Purpose Space
- Large Community Parks
- Neighborhood Parks
- Mini Parks
- Tree Canopy
- Proposed Trails
- Existing Trails

EXISTING COMMUNITY GREEN SPACES

BARTRAM'S GARDEN

The historic botanical garden and arboretum was established in the mid 18th century by John Bartram, a botanist and explorer. Now the garden promotes equitable among people and nature.

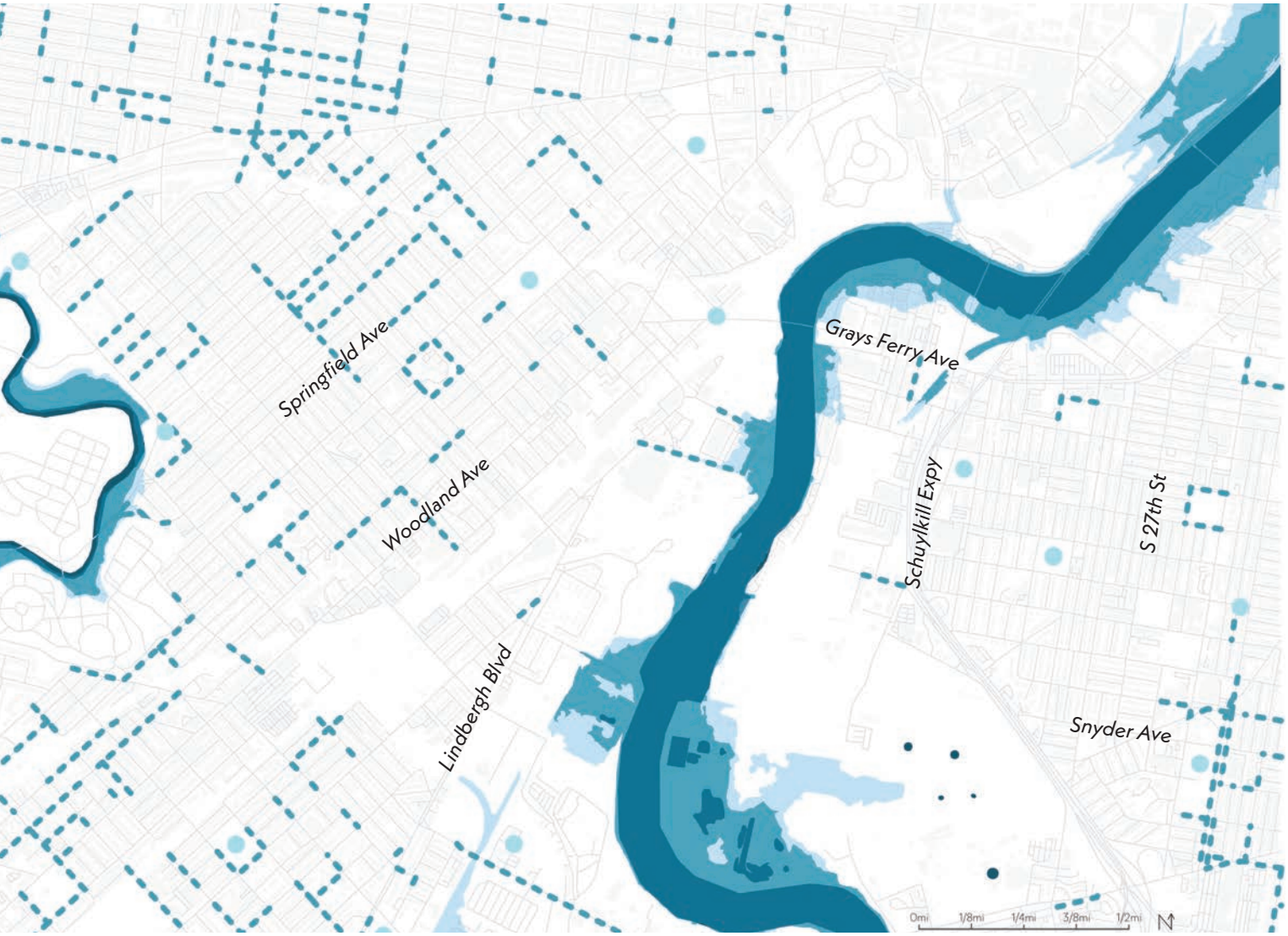
Kingsessing Rec Center

Mt Moriah Cemetery

Myers Rec Center

Hydrology

This shows the Sea Level Rise predictions for both 100-year and 500-year flood events in relation to existing GSI project sites and streets. In the core of Kingsessing, efforts to mitigate flooding are missing. Types of Green Stormwater Infrastructure that the Green City Clean Waters' group have implemented are shown below.



- Existing Water Bodies
- 100 Year Flood Event
- 500 Year Flood Event
- GSI Project Sites
- GSI Project Streets

TYPES OF GREEN STORMWATER INFRASTRUCTURE

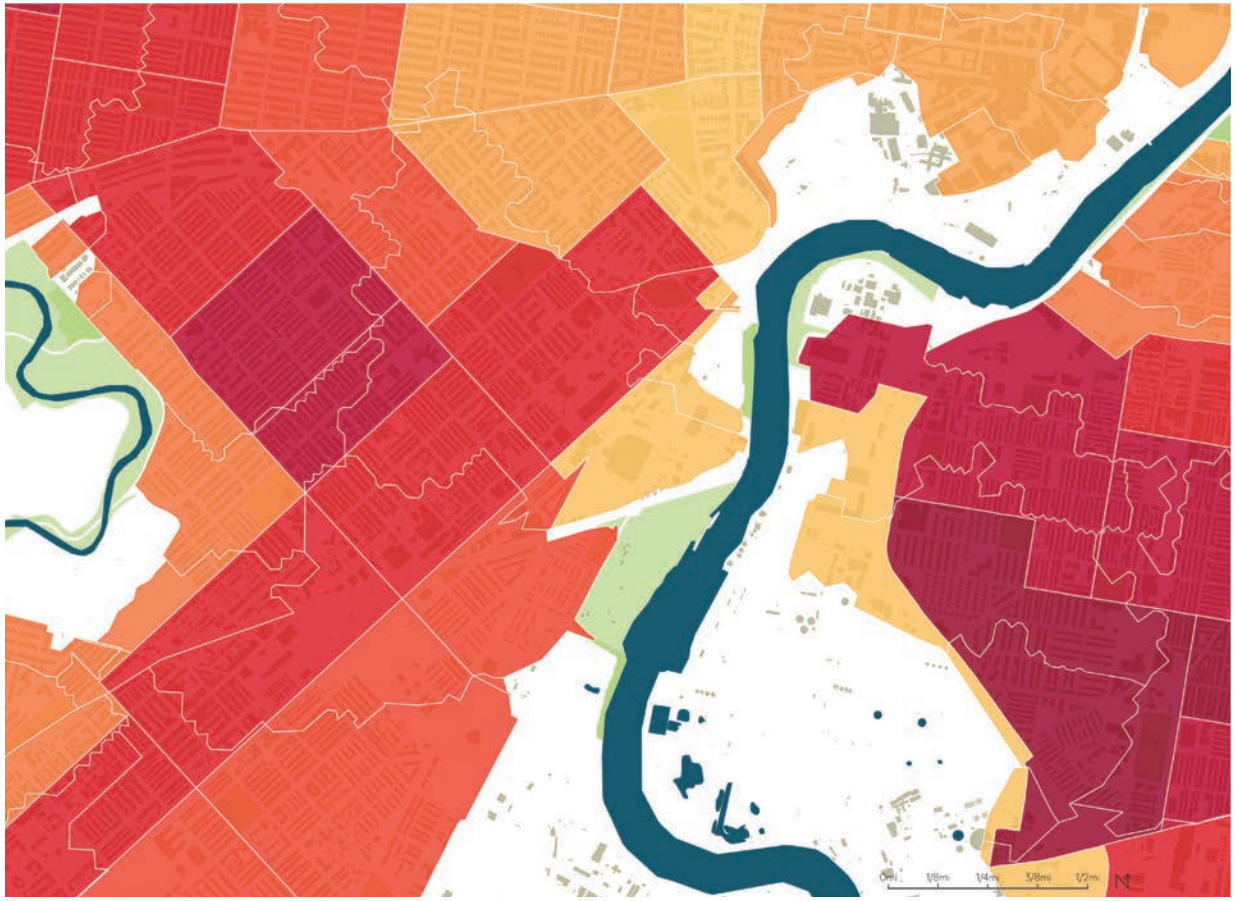
Bioswale

Tree Trench

Rain Garden

Bioretention Basin

Permeable Paving



- Lead exposure/ hazardous chemical exposure
- Access to green spaces
- Opioid use rates
- Access to essential healthy resources
- Effects of Climate Change
- School rates
- Median Income
- Crime rates
- Living affordability

MEASURES OF VULNERABILITY

54.0% of children in Kingsessing live below the poverty line

AREAS OF OCCUPATION FOR THOSE WHO ARE EMPLOYED

24.0%

SALES AND SERVICE JOBS

33.2%

CLERICAL, ASSISTANT, AND TECH SUPPORT OCCUPATIONS

15.7%

EXECUTIVE, MANAGEMENT AND PROFESSIONAL OCCUPATIONS

26.6%

MANUFACTURING AND LABORER OCCUPATIONS

Social and Ecological Vulnerability

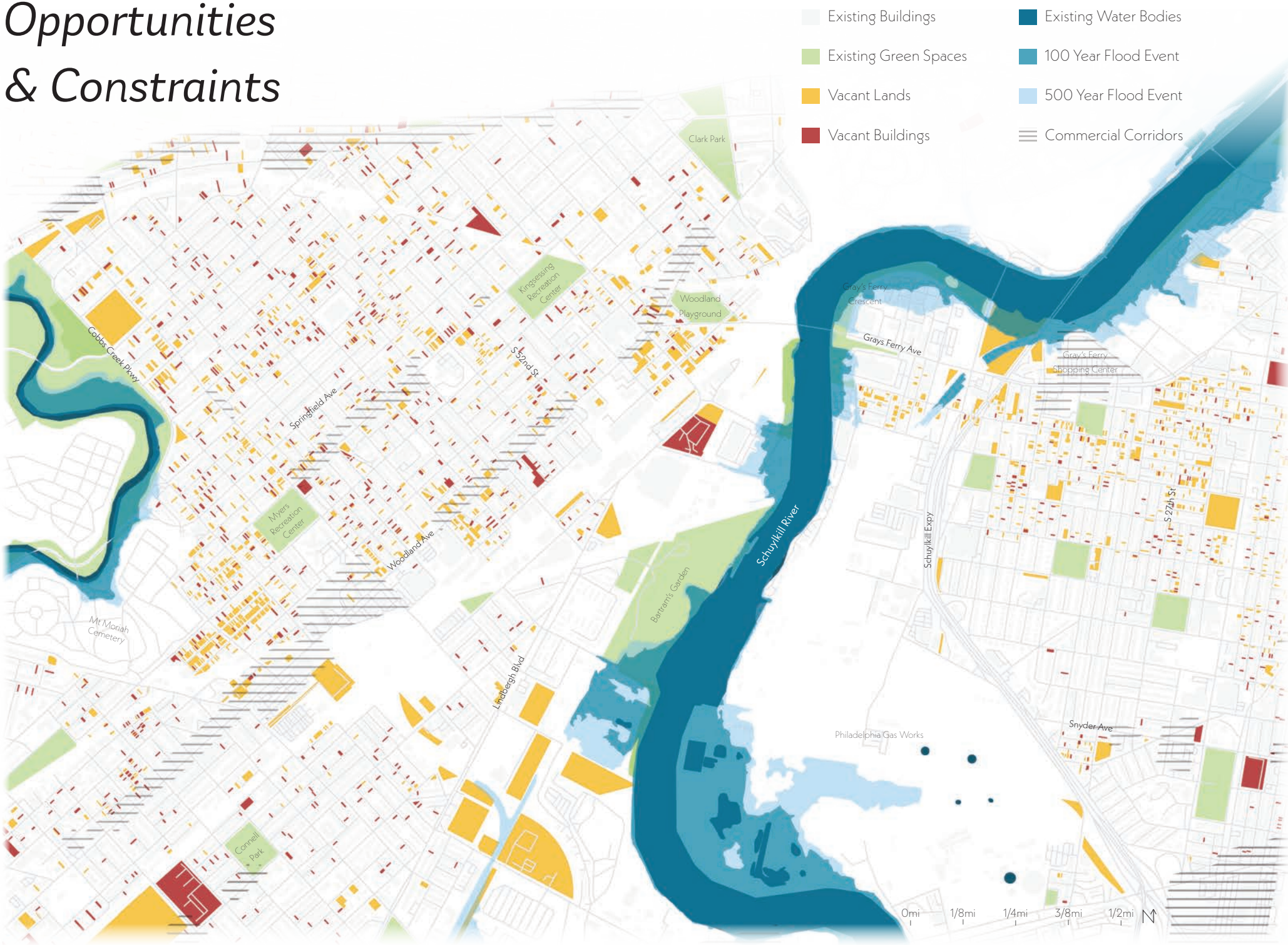
Mobility Access

Public transportation is a factor that should always be considered when measuring the accessibility of a neighborhood. While Kingsessing and Grays Ferry have access to rail, bike and bus routes, they are still spread far too thin for the amount of people who live in these areas.

AN ESTIMATED TOTAL OF 24,923 PEOPLE PER SQUARE MILE LIVE IN KINGSESSING.

- SEPTA Rail
- Bike Paths
- SEPTA Bus
- Bust Stops
- Rail Stops

Opportunities & Constraints



CULTIVATING COMMUNITY CATALYSTS

Creating opportunities for the community to enhance and strengthen what's already there

- Adaptive reuse
- Deconstruct not demolition
- Cultural center/Community Center
- Reclaiming architectural typology
- Introducing local businesses
- Strengthening commercial corridors

BOOSTING BIODIVERSITY

Strengthening the ecological diversity of the site and bettering the interactions between nature and humans

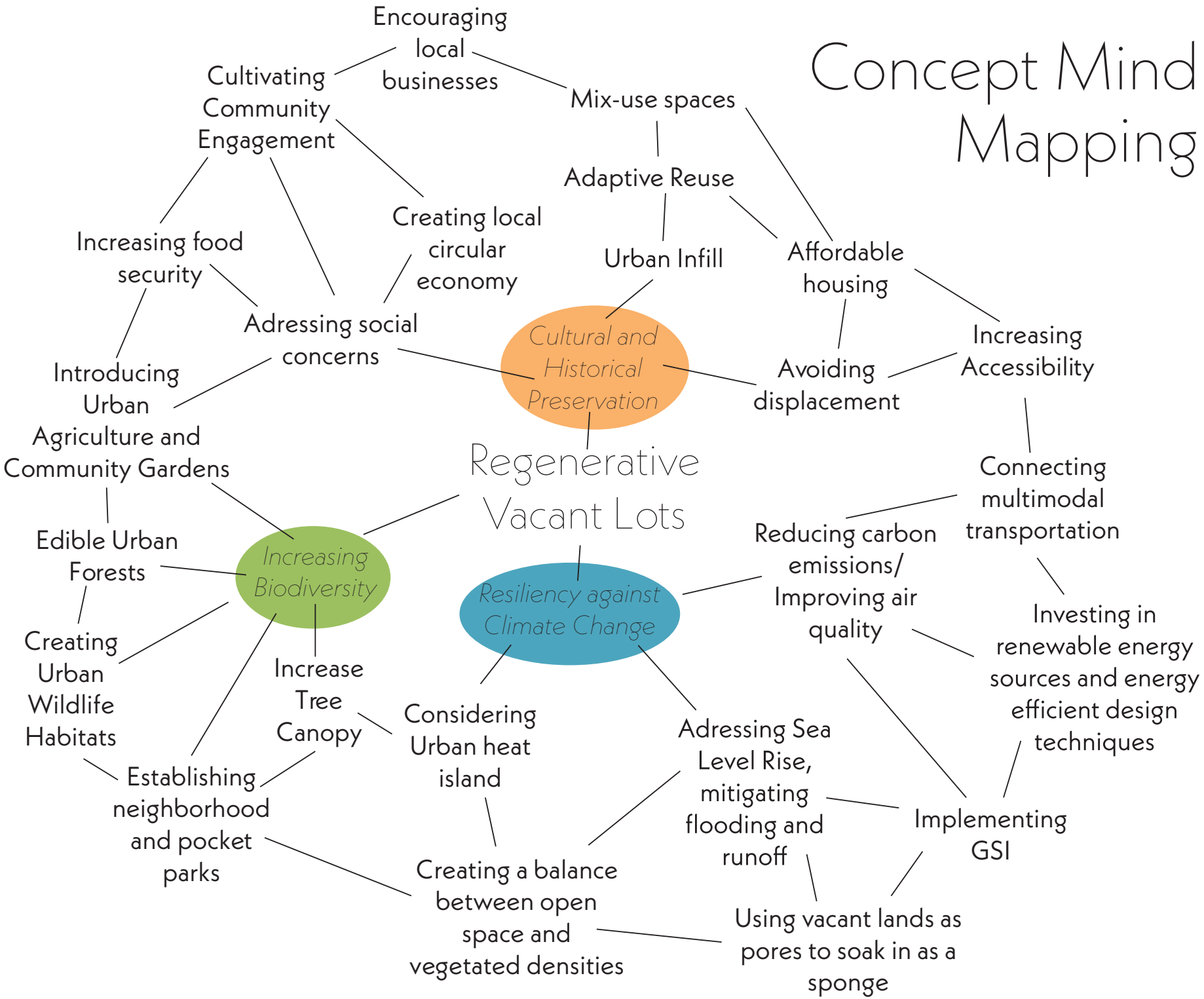
- Rain gardens
- Edible urban forests
- Wildlife habitat pocket parks
- Green street practices
- Urban agriculture
- Community garden
- Compost Centers

SOWING SUSTAINABLE SYNERGY

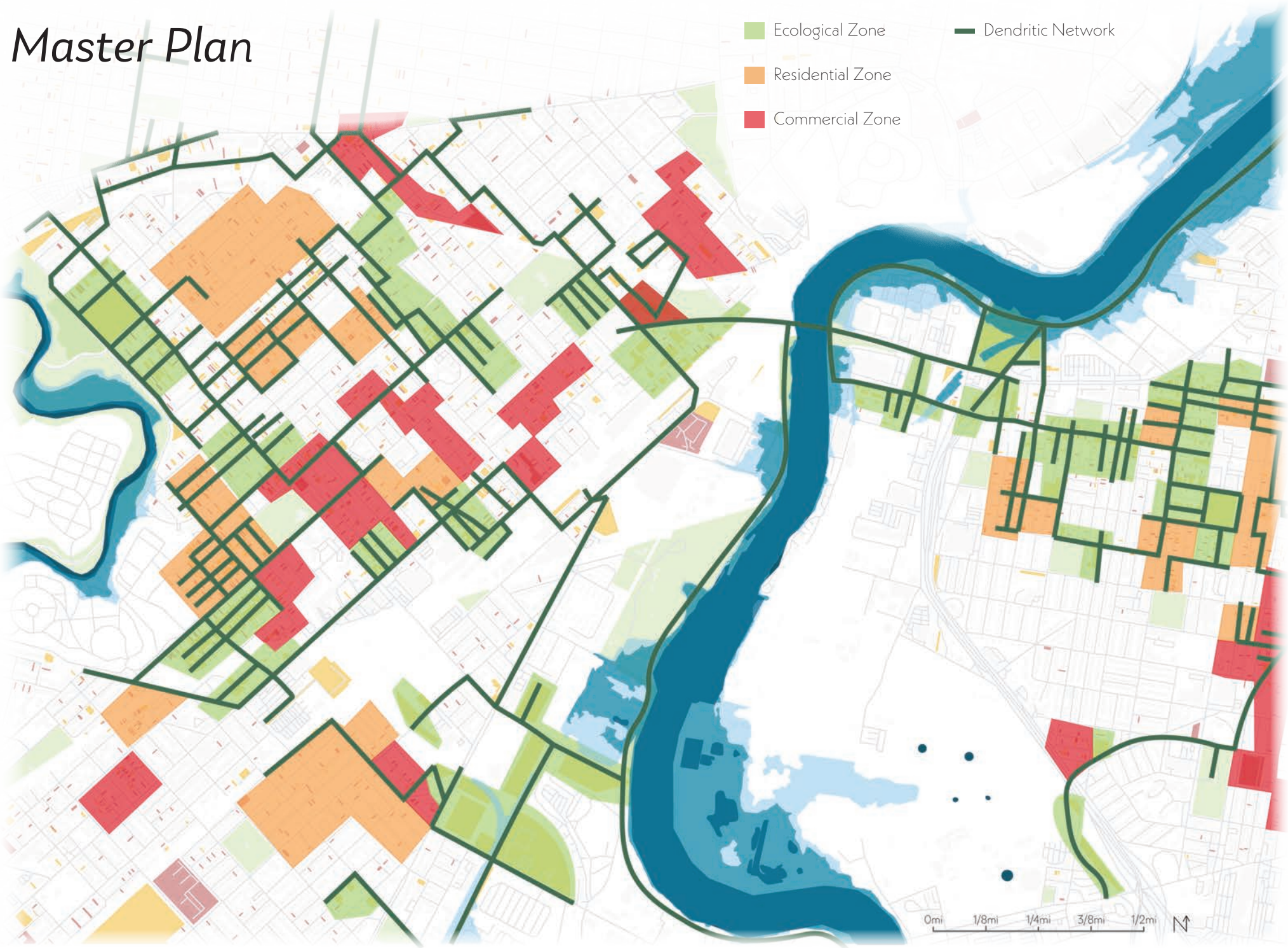
Introducing ways for community to empower itself through sustainable methods

-Urban Agriculture
- Vocational Centers
-Boosting employability
-Eradicating food desert
- Solar panels in public places
- Rain water harvesting
- Tree canopy intensification

Concept Mind Mapping



Master Plan


Ecological Zone
Residential Zone
Commercial Zone
Dendritic Network
0mi
1/8mi
1/4mi
3/8mi
1/2mi

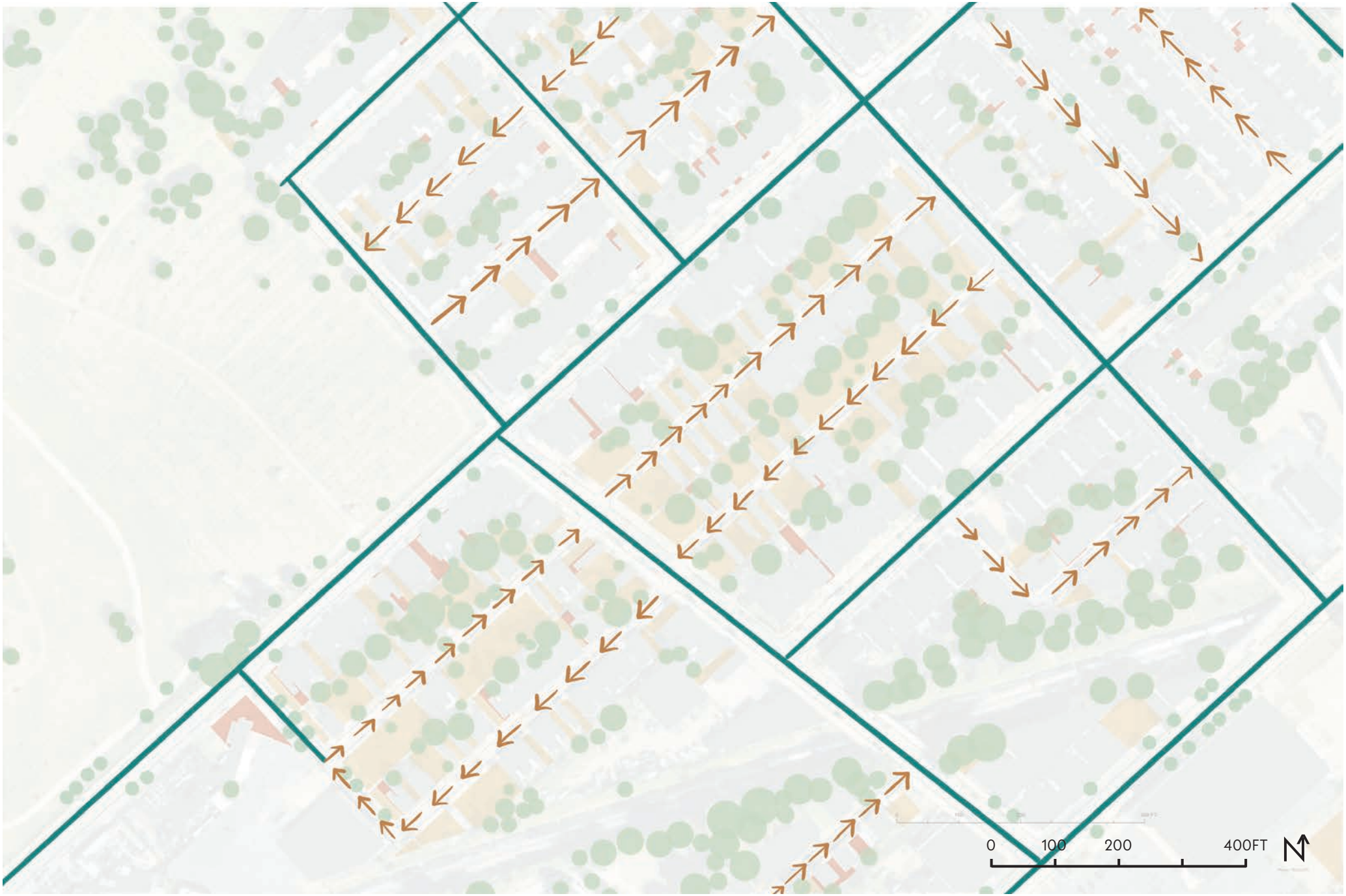
SITE ZONING

Industrial Commercial Mix Use

Medium Residential Single Family- Attached

Neighborhood Commercial Mix Use

All other blocks on the site are zoned as small single family residential attached. These separations can also inhibit more inclusive and accessible housing opportunites.



VEHICULAR CIRCULATION

Two Way Street

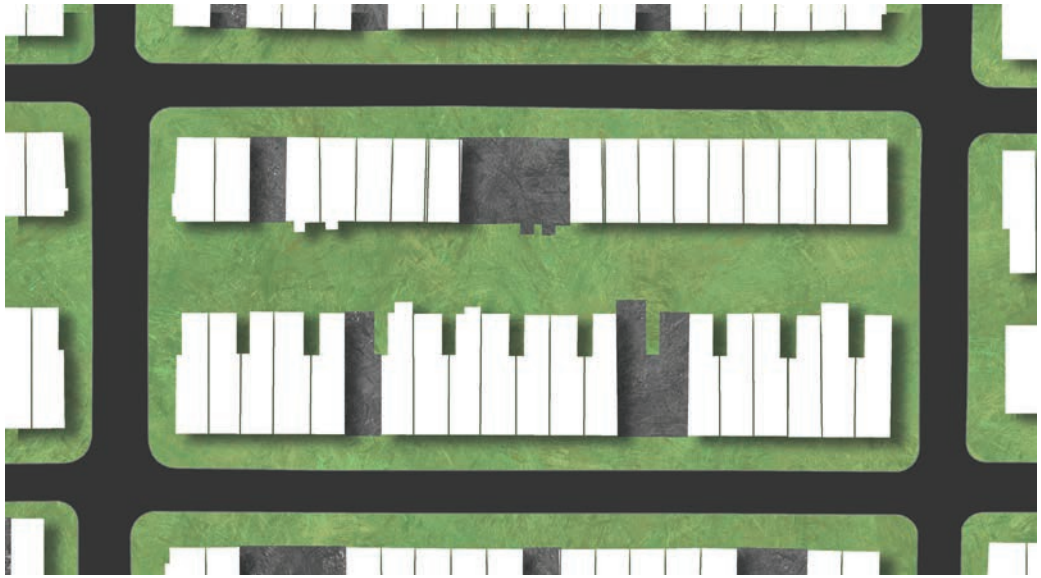
One Way Street

Knowing the vehicular of the site allowed for different types of inter-street connections such as table topping sections to slow down traffic while connecting two sides of the street or cultivating commercial storefronts and amenities to entice people to come and go between both sides of the street

SITE VACANCIES

With a lot of vacant lands and buildings on the site, it allows for a number of different interventions that will benefit human and wildlife communities alike.

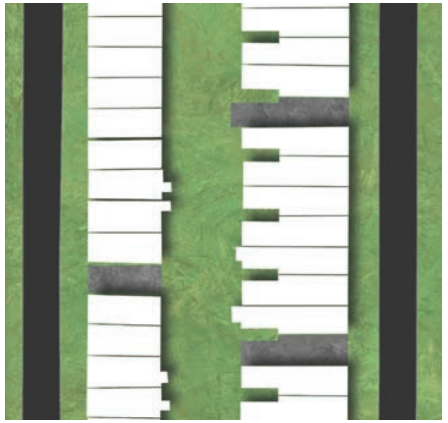
SWISS CHEESE



The "Missing Teeth" and the "Swiss Cheese" patterns are especially detrimental to the vitality of neighborhoods, causing:

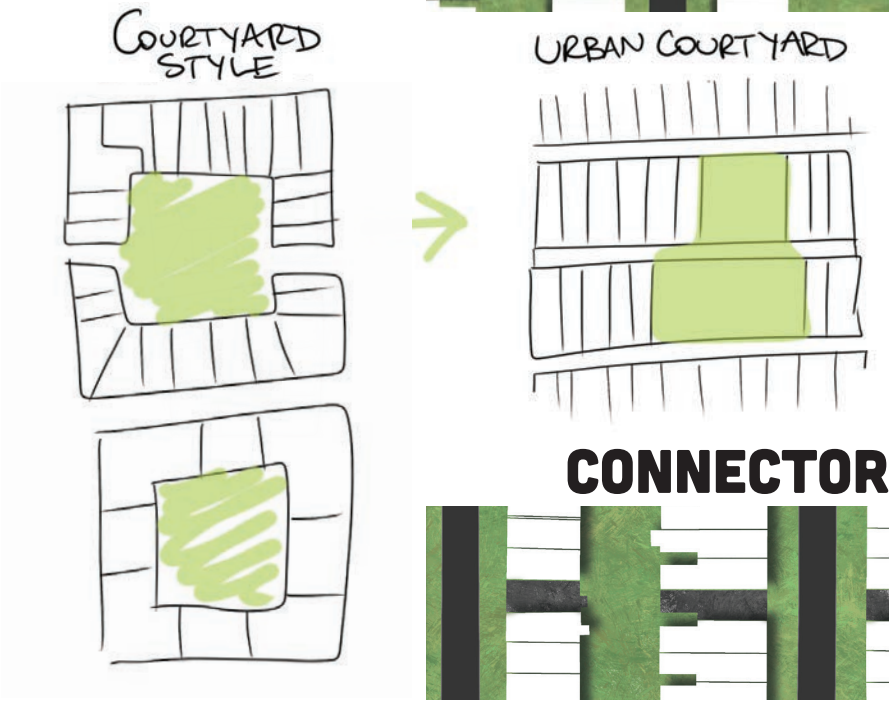
- LOSS OF INSULATION AND HEAT RETENTION=MORE EXPENSIVE AS IT IS LESS ENERGY EFFICIENT
- REDUCED NATURAL VENTILATION
- WORSENING URBAN HEAT ISLAND EFFECT
- LOSS OF STRUCTURAL INTEGRITY

MISSING TEETH



BLOCK

A vacant block can turn into an urban courtyard. Connecting residents on two sides of the street.



CONNECTOR

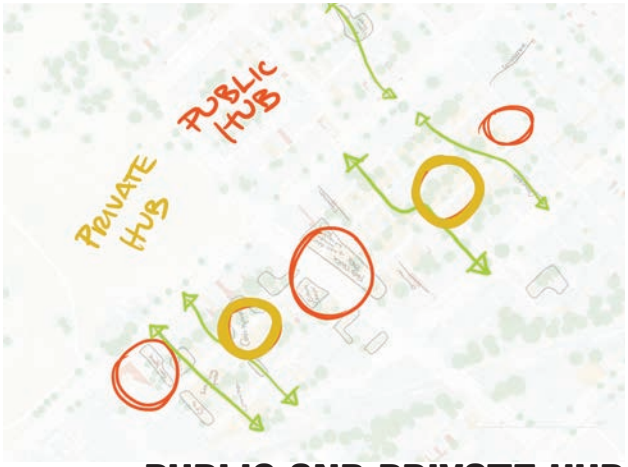
A vacant connector can transform into new pathways for residents to travel from street to street, a new pocket park or a new wildlife habitat alleyway.

INITIAL CONCEPT PLAN

Using the majority of vacant lots, a master plan of the zoomed in site began to form with a mixture of productive green spaces and passive green spaces, areas for more private residential interactions and some attractive commercial interventions. The goal was to begin to understand how all of these vacant spaces could interact with not only one another but the existing site itself and those who live there.

PARTI ORGANIZATION OF PURPOSE

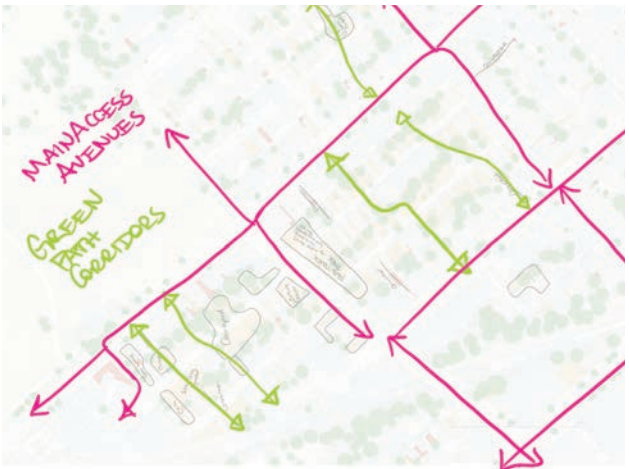
It is important to balance the interactions of public vs. private space when dealing with any residential area, but especially in low income areas in order to make sure existing residents don't feel overwhelmed and unwelcome in their own communities.



PUBLIC AND PRIVATE HUB INTERACTIONS

ZONES OF ACCESS

ADAPTIVE REUSE AND STRUCTURAL RENEWALS



ACCESS CORRIDORS

MASTER PLAN

A Community Vocational Center
B Food Bank with Cafe
C Community Gardens
D Meadows
E Urban Agriculture
F Village Courtyard
G Community Center w/Library
H Art Garden
I Community Square
J Farmer's Market
0
100
200
400FT

COMMUNITY SQUARE
VILLAGE COURTYARD
URBAN AG/TRADE

SOWING SUSTAINABLE SYNERGY

FOOD BANK W/ CAFE

COMMUNITY VOCATIONAL CENTER

COMMUNITY GARDENS W/ EDIBLE FOREST EDGE

URBAN AGRICULTURE BEDS AND GREENHOUSES

POLLINATOR MEADOW W/ SEATING

COMPOST CENTER

EDIBLE FOREST AND ORCHARD

Urban Agriculture + Vocational Trades

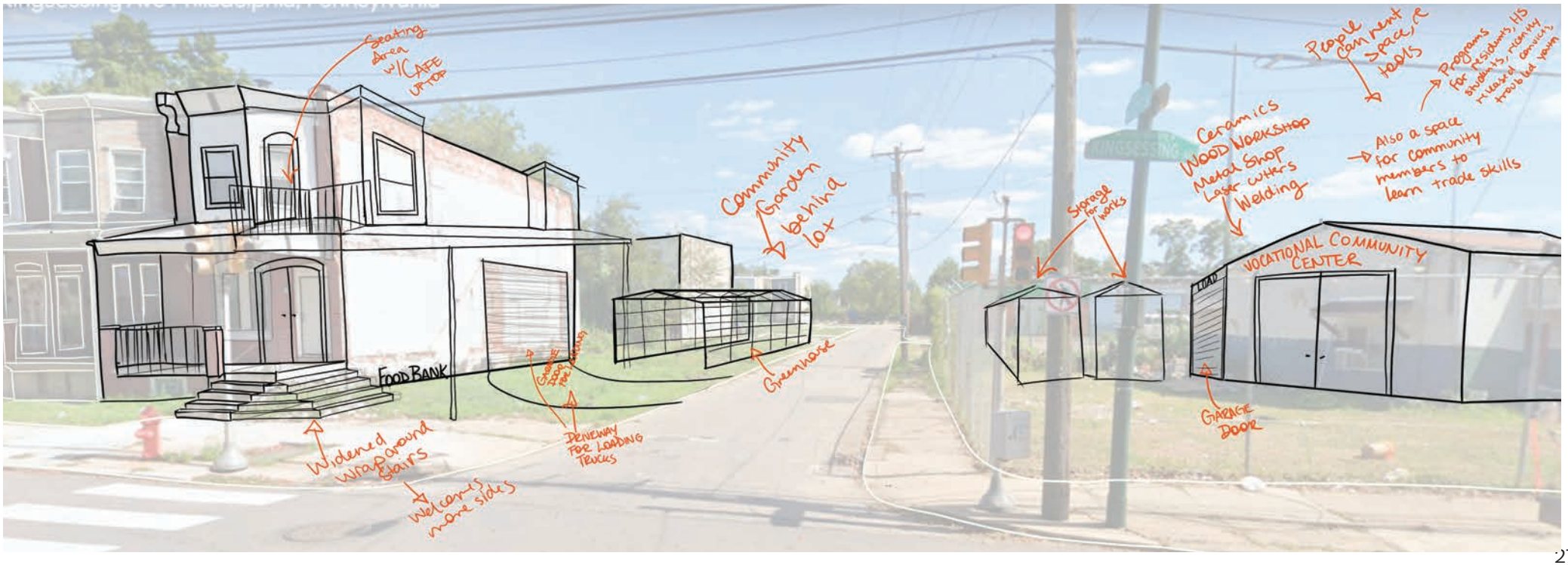
COMMUNITY VOCATIONAL CENTER

By introducing a community vocational center, the community will have a new venue of profit and an increase in employability. Not only will it bring jobs to those working and teaching there, it will also train people in technical skills that will allow them to find employment.

URBAN AGRICULTURE

The community will have yet another source of profit by utilizing it's vacant lands for a variety of forms of urban agriculture. It will be crucial to pair edible forests, community gardens and the urban agriculture beds and greenhouses with pollinator meadows and other wildlife habitat hubs to ensure the best quality of produce. The allocated productive area includes around 10.8527319 acres, which would yield around:

567,294 POUNDS OF FOOD PER YEAR, TOTALING $709,117.5 PER YEAR



By allowing the residents of the community decide what plantings they want to include in their community gardens and urban agricultural spaces, it will give opportunity for people to grow food that reflect the food they eat regularly in their own cultures

CULTIVATING COMMUNITY CATALYSTS

Community Square

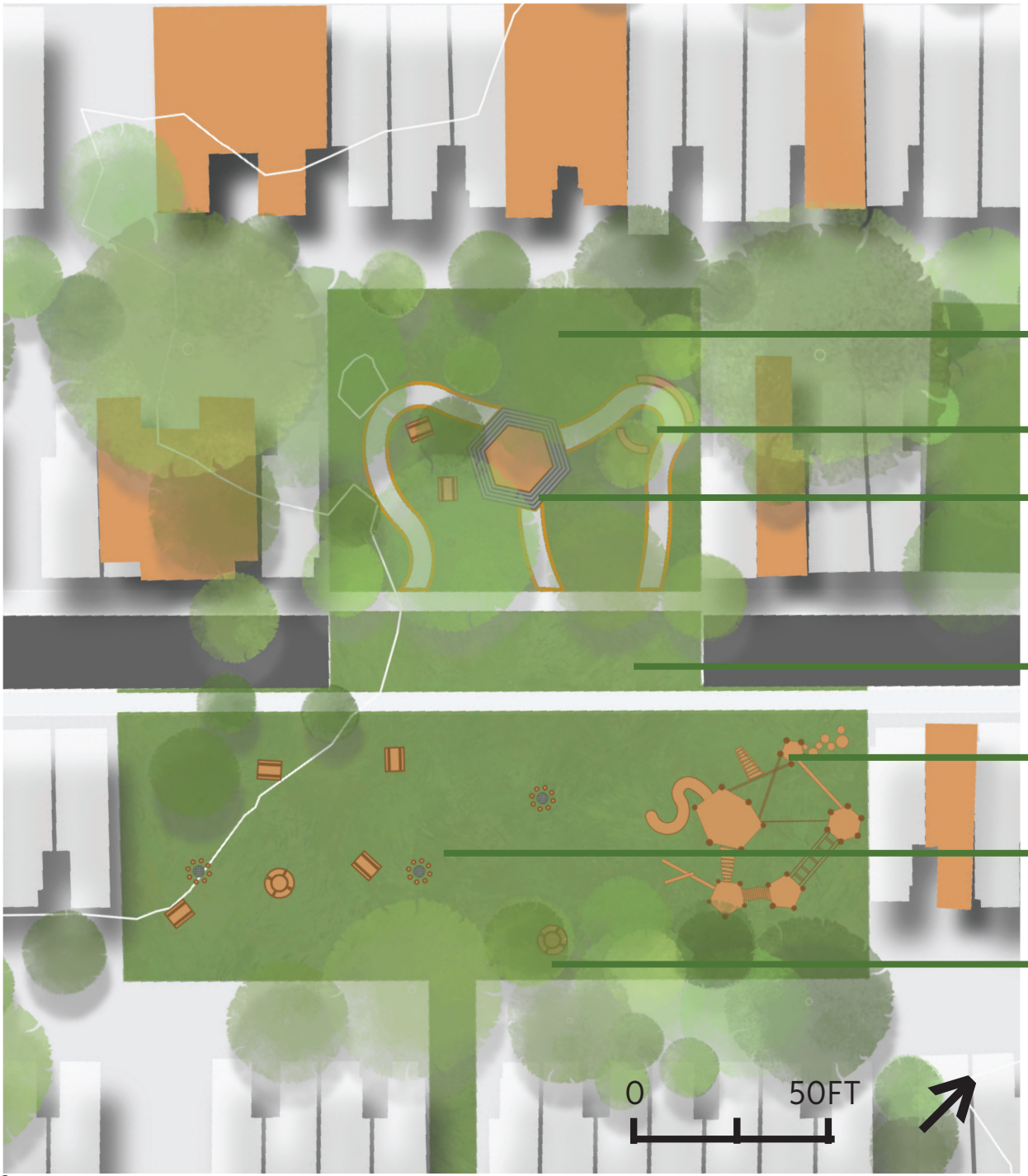
COMMUNITY CENTER W/ LIBRARY

The Community Center will serve the community and strengthen the bonds of its residents by creating that third place in one's life. It will house workshops, daycare, after school programs and more. It will also have its own free public library, as most of the nearby ones have been shut down since COVID-19

FOOD TRUCK PARK

In addition to the urban farms and food bank, the Food Truck Park will serve as a commercial attraction along S 61 Street and Kingsessing Ave. The community square will include an area for food trucks, picnic tables and many other seating options surrounded by vegetation and an area to host farmer's markets

BOOSTING BIODIVERSITY



WILDLIFE HABITAT EDGE

CIRCULAR SEATING

ROW HOME INSPIRED ECO GAZEBO

TABLE-TOPPED STREET

NATURE INSPIRED ADVENTURE PLAY

COMMUNITY GRILLS AND PICNIC SPACE

WILDLIFE HABITAT EDGE

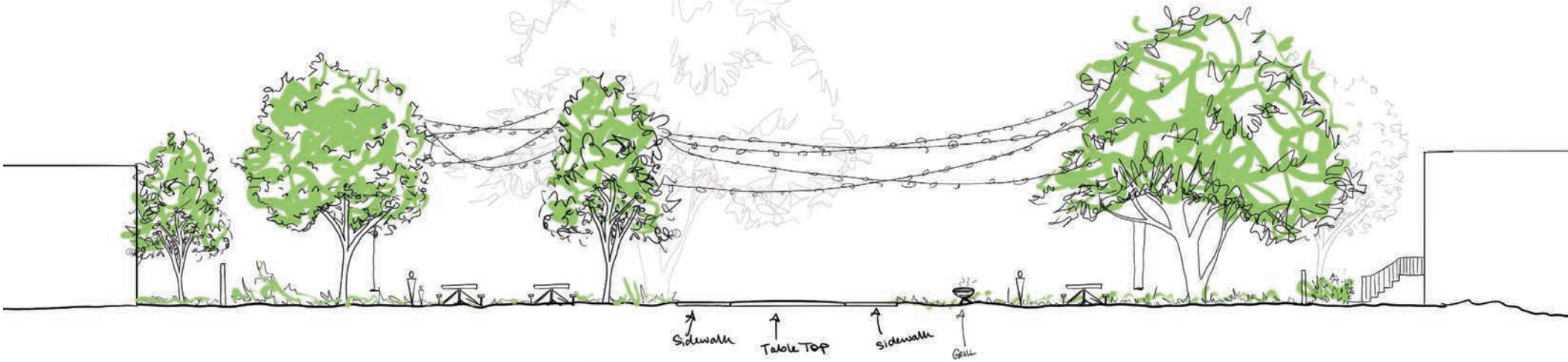
Village Courtyard

COURTYARD MODEL

Introducing a courtyard model to this neighborhood park allows the residents to create a closer bond with one another as they share this more private and family-oriented park. A portion of the street is table-topped to visually and physically connect both sides of the street. There is a lot of adaptability in the space with various types of seating which allows people to gather in large groups or keep it to small groups. The grills also invite people to spend more family time and provides that opportunity of outdoor cooking to those who don't have the means or space to have an outdoor grill in their own backyards.

WILDLIFE HABITAT EDGES

Having a wildlife habitat edge surrounding the village courtyard not only creates privacy for the residents who are adjacent to the park, it also allows people to interact with nature in a completely different way than if it were all lawn and manicured gardens. Following this theme, the nature inspired adventure play was designed to encourage children to spend more time outdoors



Row home inspired eco-gazebo that shows water moving to small rain gardens surrounding it

APPENDIX

CASE STUDIES

THE PUBLIC VALUE OF URBAN VACANT LAND: Social Responses and Ecological Value

Authors:
Gunwoo Kim

Source:
Kim, G. (2016). The public value of urban vacant land: Social responses and ecological value. Sustainability (Switzerland), 8(5) doi:10.3390/su8050486

Summary Paragraph / Abstract

The article addresses the lack of usage of urban vacant lands through a comprehensive literature review and case studies of vacant land revitalization/ reuse. The findings are synthesized across multiple examples to increase awareness and understanding on the role of vacant lands to create sustainable and healthy cities. It focuses on highlighting the potential ecological and social benefits of introducing green infrastructure to vacant lands so that they are part of the city's overall framework. Study is used as a reference for landowners, local authorities, planners, urban designers and landscape architects, which encourages the understanding of vacant lots as valuable resources.

Major Points or Topics

- Article contains numerous different uses for small scaled and large scaled vacant lots all with different ecological and social benefits, and how they have performed in projects.
- Results demonstrate that urban vacant lands are vital resources and components to urban green infrastructure and their benefits. These vacant lands can increase the effectiveness of already existing as well as proposed green infrastructure while minimizing negative effects.
- Allows otherwise heavily built up city environments to have alternative landscape designs that offer more creative opportunities
- The article reveals the struggles and barriers that cities have to overcome when incorporating different types of vacant lands as integrated systems of urban green infrastructure.

Design Implications for MY PROJECT

- Vacant Land, Green Infrastructure, Ecosystem Services, Ecological Value
- Using as a reference and source of inspiration for different types of design interventions with Vacant Lots depending on site conditions

RESILIENCE THROUGH REGENERATION:
The Economics of Repurposing Vacant Land with Green Infrastructure

Authors:
Galen Newman
Li Dongying
Zhu Rui
Ren Dingding

Source:
Newman, G., Dongying, L., Rui, Z., & Dingding, R. (2019). Resilience through regeneration: The economics of repurposing vacant land with green infrastructure. Landscape Architecture Frontiers, 6(6), 10-23. doi:10.15302/J-LAF-20180602

Summary Paragraph / Abstract

"Resilience through Regeneration" proposes a design approach that mitigates flood events in urban communities through repurposing vacant lands to include green infrastructure (GI). The article calls for a balance in redevelopment of vacant lands to include green infrastructure with new developmental land uses in order to account for storm water runoff. The project evaluates the performance of green infrastructure regeneration projects measuring hydrological and economical performance of three different marginalized neighborhoods in Houston, Texas. Results show that by introducing green infrastructure to regeneration projects of vacant land, flood risks continually decrease, upfront economic costs increase in the short term and the long term economic return on investments are higher.

Major Points or Topics

- Authors used the Landscape Architecture Foundation's series of landscape performance tools to measure the effectiveness of their design proposals in the three communities, South Park, Manchester and Sunnyside. Notably they used the Center for Neighborhood Technology's (CNT) National Stormwater Management Calculator and the National Green Values Calculator (GVC).
- Article used the same characteristics of amount of vacant lands, and the same type of vacant lands, but each community had their own special characteristics that allow for other designers to apply to a wider variety of projects.
- Areas with vacant lands that had regenerative GI interventions had a significant improvement in stormwater retention, land use optimization and a high long-term investment rate.

Design Implications for
MY PROJECT

- Vacant Land, Repurposing. Sponge City, Green Infrastructure
- Using "vacant land as pores" to soak up stormwater in urban areas

Vacant Lot Reuse Through Green Infrastructure

REPURPOSING VACANT LAND Through Landscape Connectivity

Authors:
Galen D. Newman
Alison L. Smith
Samuel D. Brody

Source:
Newman, G., Smith, A., & Brody, S. (2017). Repurposing vacant land through landscape connectivity. Landscape Journal, 36, 37-57. doi:10.3368/lj.36.1.37

Summary Paragraph / Abstract

The number of vacant lands across the world in urban areas has increased by a large amount which has provided an opportunity to increase the connectivity of green spaces and natural systems. Almost half of the non-productive space in urban areas are located in flood-risk locations. Article provides a regional framework for creating ecological networks in urban areas through repurposing vacant lots. This analysis maximizes the connectivity of the urban landscape by taking in consideration the potential vacant lots have to connect existing habitat patches, wetlands, small-scale spaces and other types of ecological corridors. Prior to this there have been no existing frameworks to guide regionally-scaled repurposing of vacant lands.

Major Points or Topics

- Methods included categorizing types of vacant lands by land use, land cover, development potential, natural conditions, weighing the natural and cultural conditions to be evaluated equally
- Used an ArcGIS extension, Linkage Mapper and the Least-Cost-Path Analysis to analyze the data
- Results show a highly connected network of ecological core areas with dendritic green framework, that allow a maximization of ecological services while avoiding competition with developable areas
- This framework stabilizes disturbances of urban ecosystems by enhancing, connecting and protecting ecological core areas

Design Implications for MY PROJECT

- Repurposing Vacant Lands, Ecological Corridor, Green Space Network, Landscape Connectivity
- Using vacant lands to connect existing green spaces to create ecological corridors

Vacant Lot Reuse Through Green Infrastructure

A framework for assessing and implementing the co-benefits of NATURE-BASED SOLUTIONS IN URBAN AREAS

Authors:
Christopher M. Raymond
Niki Frantzeskaki
Nadja Kabisch
Pam Berry

Source:
Raymond, C. M., Frantzeskaki, N., Kabisch, N., Berry, P., Breil, M., Nita, M. R., . . . Calfapietra, C. (2017). A framework for assessing and implementing the co-benefits of nature-based solutions in urban areas. Environmental Science & Policy, 77, 15-24. doi:10.1016/j.envsci.2017.07.008

Summary Paragraph / Abstract

Reviewed over 1700 documents from science and practice assessing co-benefits of Nature Based Solutions (NBS) across cultural and economic elements, bio-diversity, ecosystems and climate. Ten different societal challenges were considered as they are relevant to urban environments globally: Climate Mitigation and Adaptation, Water Management, Urban Regeneration, Participatory Planning and Governance, Coastal Resilience, Social Justice and Social Cohesion, Green Space Management, Public Health and Well-Being, Air Quality, Economic Opportunities and Green Jobs.

Major Points or Topics

- Proposed framework includes 7 steps; Identify problem or opportunity. Select and assess NBS and related actions. Design NBS implementation processes. Implement NBS. Frequently engage stakeholders and communicate co-benefits. Transfer and upscale NBS. Monitor and evaluate co-benefits across all stages.
- Problems to be addressed by NBS are multi-dimensional and complex, so the selection and assessment of NBS and related actions requires the participation of a wide range of stakeholders, multi-disciplinary teams and policy and decision makers
- Any NBS policy or implementation needs to take note the effectiveness of the interventions and how they are the best option for each space.
- Thorough a holistic process of option selection, NBS Design implementation, monitoring, evaluation and upscaling.

Design Implications for
MY PROJECT

- Nature Based Solutions, Green Infrastructure, Ecosystem Services, Trade Offs and Cost Effectiveness
- Using the similar societal challenge areas to guide approaches of assessing the impacts of NBS on different types of indicators

THEORETICAL FRAMEWORK OF INCLUSIVE URBAN REGENERATION
Combining Nature-Based Solutions with Society-Based Solutions

Summary Paragraph / Abstract

Paper proposes a solution to current problematic urban planning strategies that cause gentrification, displacement of indigenous residents and fragmented communities. By combining Nature Based Solutions (NSB) and Society Based Solutions, a new mode of urban regeneration fills the gaps of existing systems by considering ways to improve safety and health, by including economic, social, cultural and community aspects. Goals are to achieve well balanced inclusive urban regeneration through economic development, environmental sustainability, social equity and cultural protection.

Major Points or Topics

- Idea that inclusive urban regeneration has to be understood from two perspectives; spatially inclusive and socially inclusive
- Developed through literary review and elaborate analysis of 10 projects that received recognition for their excellence in meeting the UN's sustainable development goals
- By safeguarding of people's interests and the encouraging public participation from municipal government, social forces have the chance to help with the execution of the project, which has brings favorable social impacts and educational effects
- Theoretical framework that illuminates possible efforts to ensure co-completion of environmental, economic, social, and cultural objectives to establish inclusive urban regeneration

Authors:

Pengcheng Xiang

Yuanyuan Yang

Zongyu Li

Source:

Pengcheng, X., Yuanyuan, Y., & Zongyu, L. (2020). Theoretical framework of inclusive urban regeneration combining nature-based solutions with society-based solutions. Journal of Urban Planning and Development, 146(2), 04020009. doi:10.1061/(ASCE)UP.1943-5444.0000571

Design Implications for

MY PROJECT

- Urban Regeneration, Inclusive, Nature Based, Society Based
- Looking for ways to incorporate local distinctiveness, and means of meeting special needs of the disabled, children, elderly, minority groups, and alleviating social problems (poverty, social exclusion, welfare dependence and social disorders) through nature based solutions and interventions

Nature Based Design

INTEGRATING JUSTICE IN NATURE-BASED SOLUTIONS TO AVOID NATURE ENABLED DISPOSSESSION

Authors:
Isabelle Anguelovski
Esteve Corbera

Source:
Anguelovski, I., & Corbera, E. (2023). Integrating justice in nature-based solutions to avoid nature-enabled dispossession. Ambio, 52(1), 45-53. doi:10.1007/s13280-022-01771-7

Summary Paragraph / Abstract

Study presents an alternative method to use nature based solutions by introducing a justice-oriented approach in order to avoid nature-enabled dispossession and displacement. This builds a nature-inspired justice that prioritizes socially and ecologically vulnerable residents by taking into consideration their needs, identities and livelihoods. Stresses the need to guarantee inclusive decision-making and adaptive management pathways to avoid negative impacts of NBS interventions.

Major Points or Topics

- 8 steps to go from nature enabled dispossession to nature-based justice in NBS policies: 1) Rigorous assessment of mitigation and adaptation benefits. 2) Regenerative and sustainable economic pathways. 3) No land speculation and associated green gentrification. 4) Alternatives to appropriation and/or enclosure of land for greening and conservation. 5) Long-term green inequalities tackled. 6) Inclusive and empowering participatory schemes. 7) No green-washing and privatization of nature for profit. 8) People's relationship with nature repaired and supported
- NBS should challenge political economy of rural and urban development while making sure residents can enjoy nature's benefits and functions

Design Implications for
MY PROJECT

- Climate Justice, Nature Inspired Justice, Land Rights, Conservation, Gentrification
- Incorporate the 8 Methods of Achieving Nature-Inspired Justice when working with urban areas to improve nature-based solutions so that it generates more just processes and outcomes while avoiding nature-enabled dispossession and displacement.

Nature Based Design

TEMPORARY USE OF POP-UP Environment's Potential for Repurposing Neglected Buildings and Spaces

Authors:
Mary Horn
Timothy Nichols

Source:
Horne, M.Temporary use of pop-up environment's potential for repurposing neglected buildings and spaces. doi:https://doi.org/10.57709/5522539

Summary Paragraph / Abstract

Proposes revitalization of underused, vacant, and neglected buildings and spaces by transforming and implementing spaces into temporary uses, such as pop-up environments while promoting new growth of small businesses, start-ups, and local entrepreneurships by encouraging the utilization of temporary use. This can facilitate change in the area by giving a new and fresh meaning to abandoned/vacant spaces. Discourages demolition of urban areas in order to preserve the urban fabric of the city and its historical culture. Establishes a new understanding of the different types of temporary uses and their functions,

Major Points or Topics

- Regeneration by occupying neglected sites encourages unique business growth, increases activity, prevents vandalism, adds vitality to the area and reduces crime rates.
- Non-traditional approach to designing environments to allow for local expression and experimentation of space by observing the relationship of property owner and temporary user, having an informal/odd site, using site spontaneously/atypically, unplanned/modest designs and projects that lack in one or all phases of planning.
- Different types of pop ups include: Stand-In, Free Flow, Impulse, Consolidation, Co-Existence, Pioneer
- Observing how people use the space with the pop-ups to see whta could potentially permanently go there

Design Implications for MY PROJECT

- Pop-Up Environments, Revitalization, Vacant Buildings, Repurposing, Urban Infill
- Establishing areas that would benefit from temporary pop-up installations to revitalize the community's spirit, engagement, economic viability, awareness etc
- Using pop-ups to tie into local events, nearby installations, green spaces and/or movements

Cultural and Sustainability
Urban Infill

BUILT CULTURAL HERITAGE AND SUSTAINABLE URBAN DEVELOPMENT

Authors:
Christopher Tweed
Margaret Sutherland

Source:
Tweed, C., & Sutherland, M. (2007). Built cultural heritage and sustainable urban development. Landscape and Urban Planning, 83(1), 62-69. doi:10.1016/j.landurbplan.2007.05.008

Summary Paragraph / Abstract

Paper looks at how the built environment provides symbolic meanings that brings cultural groups and communities together across generations. Emphasizes the fact that "cultural heritage is an important part of societal and community well-being" and how the built environment can affect the quality of life of individuals and neighborhoods. The paper redefines the definition of built heritage to include evolving definitions of sustainable development and how different groups of people perceive built heritage.

Major Points or Topics

- Conducted perception and attitude studies to assess citizens' perceptions and attitudes toward built heritage. The studies examined three groups of indicators and collected relevant socio-economic background information. The three groups included indicators associated with perception, indicators associated with proposed interventions, and categorical indicators.
- Always develop a deeper understanding of the meaning of built heritage of the people you are working for, and how these meanings are created and sustained for different groups of people.
- By involving the public in debates on new sustainable development through these tools, a greater sensitivity is achieved. The negative perceptions of people in spaces that are getting new development, additions and/or infill near/in historic towns are decreased as you have asked for input, involved them and tried to incorporate that in. People want someone to listen to them.

Design Implications for MY PROJECT

- Built Heritage, Cultural Heritage, Sustainable Development, Preservation, Perception
- Making sure to get public input through surveys and perception studies in areas of interest
- Educating people on what is changing in their neighborhoods and how built and cultural heritage is being preserved
- Including preservation of built heritage with sustainable development

Cultural and Sustainability
Urban Infill

EVENT AND SUSTAINABLE CULTURE-LED REGENERATION: Lessons from the 2008 European Capital of Culture, Liverpool

Authors:
Yi-De Liu

Source:
Liu, Y. (2019). Event and sustainable culture-led regeneration: Lessons from the 2008 European Capital of Culture, Liverpool. Sustainability, 11(7) doi:10.3390/su11071869

Summary Paragraph / Abstract

Article explores what are success factors that lead sustainable culture-led regeneration. Based on a case study on the Capital of Culture, Liverpool, England, the study reveals that by incorporating events in a city's long-term regeneration trajectory, there is continued support and enhancement of local cultural processes and structures. By highlighting the community's involvement and development it ensures the cultural sustainability of event.

Major Points or Topics

- Culture is the catalyst and engine for regeneration
- Culture needs to become embedded in the sustainable development model to ensure regeneration and continued public support and strengthening of local cultural processes and structures.
- Investigated Liverpool's strategy and long-term impact from three aspects: cultural funding dilemma, economic dilemma, and spatial dilemma.
- Culture-Led Regeneration: Culture is the catalyst, a new or reused space/building used for commercial/public use or cultural events is used to reshape the city
- Cultural Regeneration: Culture is fully integrated into other regional development strategies and is prioritized in urban planning process
- Culture and regeneration: culture has a specific but limited role and is not fully integrated into urban plans or strategies

Design Implications for MY PROJECT

- Culture, Regeneration, Sustainability, Community Involvement
- Figure out the things that people are passionate about and that represent them as a community and protect and enhance it.
- Continuous event programming and reaching out to local community centers and schools, making sure to keep it inclusive of all people

Cultural and Sustainability
Urban Infill

THE "SPONGE CITY" INITIATIVE
Shenzhen, China

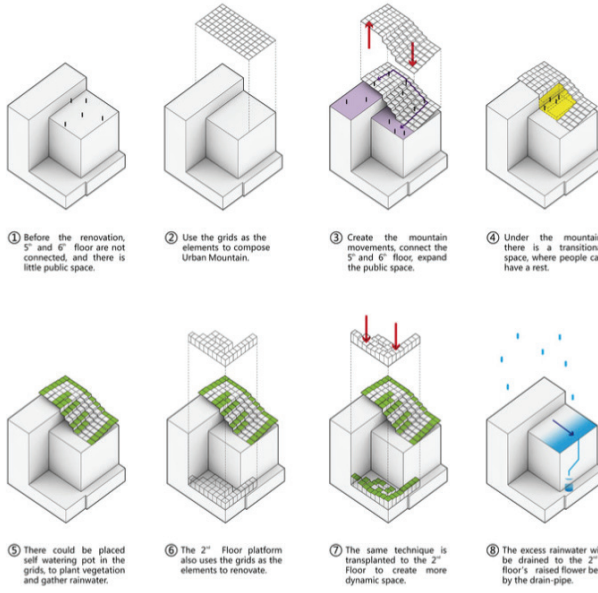
General Overview

The Sponge City Initiative uses techniques that mimic nature. Sponge cities **catch, clean and store rain water,** reducing the risk of flooding and keeping local drainage and water treatment systems from overflowing. Shifts from gray infrastructure to green infrastructure.

Introduces rain gardens, permeable paving, bioswales, retention basins, tree trenches, green roofs, constructed wetlands, etc. Aims to restore the ability to capture water for reuse during dry times.

City Information

- Population: 12.59 million
- Modern metropolis in Southeastern China
- Size: 792 mi^2
- Subtropical Climate



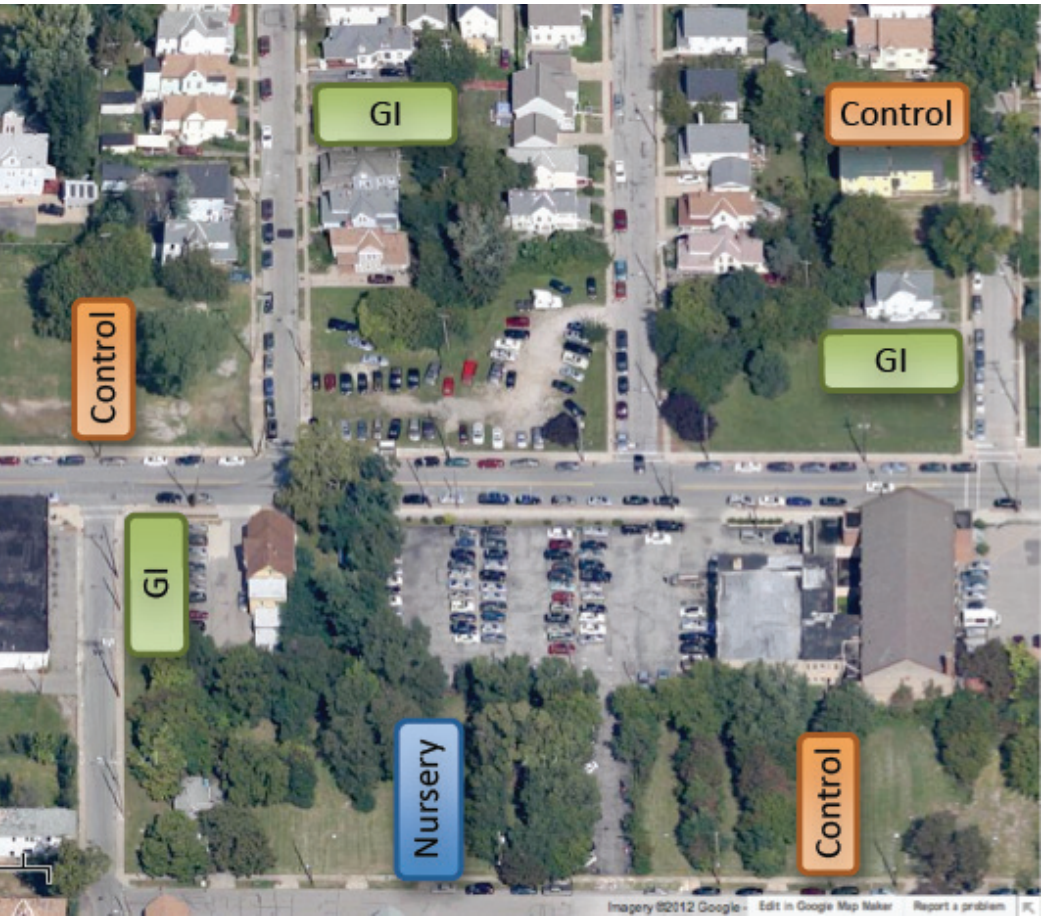
Green Cloud: Urban Mountain

- Size: 968.75 sqft
- Year: 2018
- Project was launched by The Nature Conservancy (TNC) in collaboration with key partners, including: Zhubo-AAO; Glocal Estate Management; and Urban Planning & Design Institute of Shenzhen.

Xiangmi Park

- An abandoned agricultural experiment station was converted into a 112 acre patch of green space in 2018.
- Yaqi Shi with Techand Ecology and Environment company helped design the park along with MLA+ and ZEN landscape architects
- Programmatic elements within the boundaries of the park include a library, children's play center, a local wedding registration office, and a recycling center.

Vacant to Vibrant: Vacant Land as Green Infrastructure – Great Lakes Region



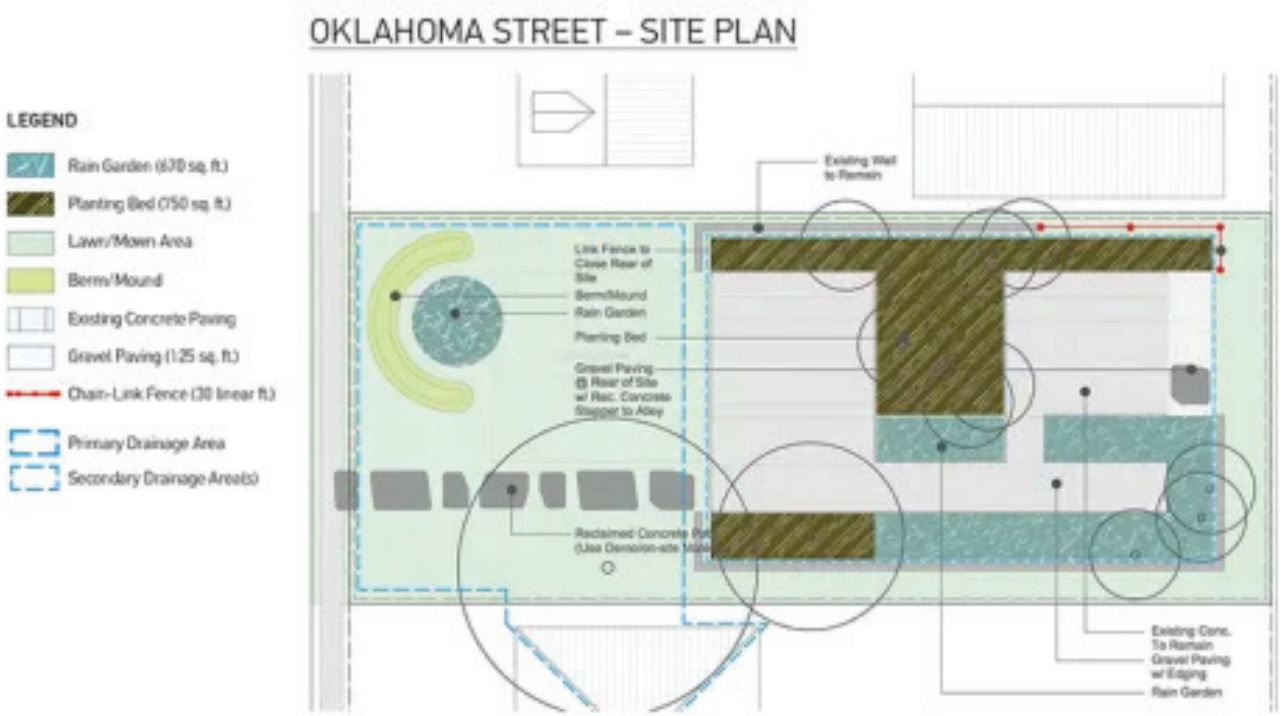
- Each city with three control sites that were monitored
- Outreach efforts in the communities to educate, get public engagement and give them a sense of ownership
- Address Vacant Lots and turn them back into neighborhood assets

Project Overview

In 2010 the Cleveland Botanical Garden started the Vacant to Vibrant project in Cleveland OH, Buffalo NY, Gary IN. Using cities' vacant lots to help with combined sewer-systems that were getting overwhelmed and flushing into the Great Lakes.

As population has declined by 40-50% in all three towns, abandoned homes and vacant lots have increased 30,000 in Cleveland, 7,000 in Gary, and more than 6,000 in Buffalo.

Awarded fund for project was $862,000



1035 Oklahoma Street VACANT TO VIBRANT

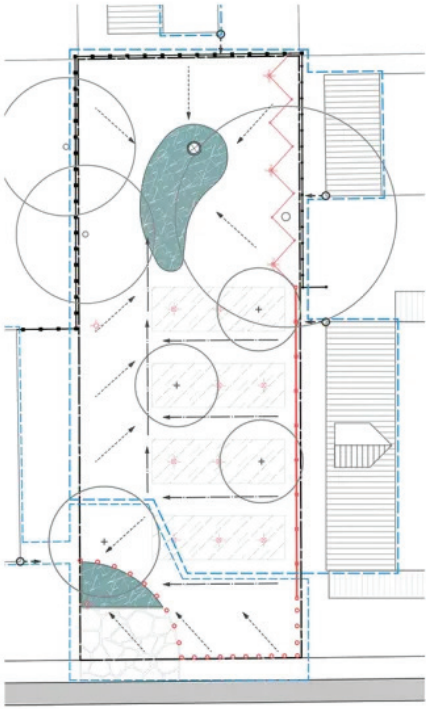
1200 Oklahoma Street VACANT TO VIBRANT

Gary, IN

- In Gary, the public was impressed with the initial rain gardens so they adopted and maintained their lots with similar strategies
- Size: 50.6 mi^2
- Population: 68,325

1252-54 Dakota Street VACANT TO VIBRANT

HULDA AVENUE – STORMWATER PLAN



LEGEND

- Rain Garden
- Overflow/Infiltration Column
- Downspout Disconnect
- Overland Sheet Flow
- Concentrated Swale Flow
- Primary Drainage Area
- Secondary Drainage Area(s)

Cleveland, OH

- Population : 367,991
- Size: 82.48 mi^2

LAWRENCE PLACE – SITE PLAN

LEGEND

- Rain Garden
- Planting Bed (Bark Mulch)
- Lawn/Mown Area
- Sport/Game Court Paving
- Chain-Link Fence
- Cable Fence
- Picnic Table

Buffalo, NY

- Population : 276,807
- Size: 52.51 mi^2

"Malmö Model" Project
Malmö Model, Sweden

The city has created green spaces and parks that not only provide recreational opportunities but also serve as natural habitats for wildlife and help to absorb carbon dioxide from the atmosphere. The city has also implemented programs to promote social equity, such as offering free public transportation to low-income residents and creating jobs in sustainable industries.

Project Overview

The city of Malmö, Sweden, has a sustainability plan called the "Malmö Model" . It aims to reduce greenhouse gas emissions and promote sustainable development. This plan includes eco-friendly housing, cycling and public transportation, and renewable energy usage, such as wind power. The Malmö Model has been successful and serves as a model for other cities all over the world.

- Regional cooperation
- A denser city with more mixed-fuction
- An equal, safe and health promoting city
- A greener city
- Business and tourism
- Traffic and transportation
- Sustainable waste management, energy and construction
- Nature, biodiversity, ecosystem services and rural areas
- Climate adaptation

Regional

- Map the capacity of the Öresund Bridge and investigate a new rail connection between the city centers of Copenhagen and Malmö.
- Planning and designating land for future businesses and eliminating barriers to cross-border entrepreneurship in the region.
- The Malmö-Lund Region should cooperate around common priorities in infrastructure investment and have joint discussions with national and regional governments

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