



National Park Cities: a Case for San Luis Obispo, California

a Senior Project by **Erik Valentine**

Senior Project

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National Park Cities: a Case for San Luis Obispo, California

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Approval Page

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Acknowledgments

This is a weird time. As I write these acknowledgements and finish up my project during these final days of May, a lot is going on. Completing a senior project and earning an undergraduate degree is a big deal, but it is paramount to put this accomplishment into perspective and acknowledge the world erupting in chaos around you. Acknowledgements are generally meant to be a time to honor the people in your life that have gotten you this far, and I will do that in a moment. There are certainly many people that I need to express my gratitude for. First, I feel the need to acknowledge the fact that I am in a position to graduate from this world class university due in large part to the privilege I have been granted by the society we live in. The privilege to grow up comfortably, in most times separate from the pain and turmoil that people in other parts of our communities, country, and world face daily. The privilege to live in such a beautiful place like San Luis Obispo. The privilege to attend a university and receive a college education.

Having said that, I am also in this position in equal parts thanks to my family, professors, and the people around me. There is no way that words can accurately portray the amount of gratitude I have, but I owe it to them to try. Perhaps the most effective way to express immense emotion is through simplicity. First and foremost, thank you to my parents, who put me in this position. Everything they have done, they did for my siblings and I. Raising three children and taking on the multifaceted burden of putting all three of them through college? Incredible.

Another thank you needs to be said to Cal Poly, and all the staff and professors in the City and Regional Planning Department. These professors are the direct source of my education and experience, and were equally affected by the sudden need to transition into online learning. It was not easy for any of us. In particular I would like to say thank you to Professor Vicente del Rio, who agreed to be the advisor for this senior project. Vicente also taught a class in Lisbon, Portugal that I was fortunate enough to attend in the summer of 2019 that taught me valuable lessons about cities in a global context and our place as students of the urban environment within them. It gave me a better understanding of context, and context is essential in the world and our mission to make it a better place. Context of our relationships to people and places, of our communities, of our societies, and how all of them effect and determine the others in unique ways to different people and places.

I also feel a need to express my thanks to the City of San Luis Obispo. The City took me in as an uncertain 18-year-old with plenty of qualms and hesitations about going through college in a small town (compared at least to my hometown), afraid of finding enough things to do and missing out on living in a bustling urban environment. Four years later, it turns out that everything I was worried about are the things I have come to love. San Luis Obispo has become a place I consider to be my home, provided the setting in which I have met some of my best friends (to whom I also say thank you) and learned valuable things about myself and how to move through life, forced me to pause and be more appreciative of some of life's simpler occurrences, and a place that I truly dread leaving

in just a few short weeks. It is not a stretch to say that the City has helped shape me into the person I am today. On a related note, I would also like to quickly thank Robert Hill, the Natural Resources Manager for the City of San Luis Obispo, for taking the time to review some of the contents in the latter section of this report pertaining to sustainability efforts in the City.

Well, I think that was dramatic enough, though perhaps maybe not so simple. I realize at the end that this section serves not just as an acknowledgement of this project, but of my entire undergraduate career and the people who enabled me to have it. So I say again, simply, thank you.

“But man is a part of nature, and his war against nature is inevitably a war against himself...
Now, I truly believe, that we in this generation, must come to terms with nature, and I think
we’re challenged as mankind has never been challenged before to prove our maturity
and our mastery, not of nature, but of ourselves.”

-Rachel Carson, 1963

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Introduction

I came across the quote by Rachel Carson on humanity's relationship to nature, and its obligations to the world around us, while taking a course on sustainable energy systems for society as we move further and further into the future. How is it that a quote spoken more than 50 years ago still holds so much relevance in its entirety today? How is it that humanity has managed to progress so far with new technologies, methodologies, and scientific findings and still in large part deny this basic human truth, that humankind is not apart from nature but plays an integral role within it? It is my opinion that perhaps some of our cutting-edge technologies fail in terms of sustainability because they aim to master nature rather than work with it, as Rachel Carson suggests. The best way to move forward more sustainably is through integration. Integrating technology with nature to work with and within it, rather than separately as a means to control it.

National Park Cities are a new way of doing just that. They seek to integrate the natural environment and the built environment. But what does that even mean? What exactly is a National Park City? To be honest, that is something that is still in the process of being figured out. The concept is so new that long-term effects of the first official National Park City in London remains to be seen. The important thing is people out in the world are trying. Trying to move from separation to integration. Positive change starts with an idea, no matter how farfetched it might sound, and picks up speed with implementation. London is the beginning of a movement that one day might end up changing the world, with effects rippling all the way across the globe to San Luis Obispo, America's happiest city on California's Central Coast.

Objectives of this Project

This project explores the novel planning model of the National Park City, exploring how it has been applied to London, England and developing a theoretical application of how it could be implemented in the City of San Luis Obispo, California. Marked by years of a progressive approach to planning and an engaged community, San Luis Obispo is unique in respecting the natural environment and in expanding environmental preservation and recreational opportunities. Becoming a National Park City would not only be an obvious result to these efforts but would make San Luis Obispo the first of its kind in the United States and project it to the frontline of an important international movement.

Contents of this Report

Chapter 1 is an exploration of the novel National Park City concept. It begins with a brief history of the environmental movements that paved the way for the formation of the National Park City Foundation, and concludes with a discussion of the concept's impact in the world. The primary case study of the research section of this project will be the world's first and only National Park City, London. After discussing the steps London has already taken towards fulfilling the National Park City concept, the project will then look at cities the Foundation has identified as possible National Park Cities of the future.

Following the research portion of this project, I will develop a design proposal for the City of San Luis Obispo, California to become the first National Park City in the United States. This will involve the creation of maps, site plans, and perspectives diagraming new park systems and other sustainable design ideas that San Luis Obispo can implement to fulfill their definition of what being a National Park City means in the context of California's climate, culture, and topography.

01

Context

A Brief History of
Environmental Activism

Environmentalism
in Planning

The National Park City
Concept



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A Brief History of Environmental Activism

Humanity has always held an inclination towards the protection of our natural environment. Myths and stories, like the Epic of Gilgamesh and the story of the hunter Orion, have been interwoven between the culture, religion, and politics of ancient societies, warning people of the dangers of disturbing the environment and creating imbalance (Weyler, 2018). Beginning with the terrible environmental impacts caused by the Industrial Revolution, modern humanity has again shown a tendency to revere and protect the world around them.

Although perhaps at times it is not readily apparent, especially today, the United States is no different from those ancient societies in showing a will to protect the environment through its history of environmental activism. America has its own environmental mysticism and legends, perhaps best represented by figures like Henry David Thoreau, Aldo Leopold, and most importantly, John Muir. John Muir, a Scottish-American ecologist, is widely considered to be “the father of the modern environmental movement,” and played a pivotal role in the preservation of America’s National Parks (Kuzmiak, 1991). Muir worked directly with President Theodore Roosevelt to identify natural lands to be designated as National Monuments under the American Antiquities Act, passed in 1906. The Antiquities Act gave the President the direct authority to declare “historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest,” situated on lands owned by the federal government as National Monuments, lawfully preserving them to protect both nature and artifacts (American Antiquities Act, 1906). Roosevelt took full advantage of this legislation, preserving

230 million acres of public lands during his presidency (National Park Service, 2017).

A discussion on the history America’s environmental movement must also include Muir’s counterpart, Gifford Pinchot. Pinchot was “the first American to declare himself a professional forester,” after graduating from Yale and studying forestry overseas (PBS, 2009). Muir and Pinchot first met in 1896, becoming friends after agreeing that “something had to be done to save America’s forests from destruction,” (PBS, 2009).

However, the two would eventually grow apart after their own natural ideologies diverged. Muir spearheaded the preservationist movement, holding that forests and other natural environments were sacred and to be treated as parks, believing that “logging, grazing, and hunting,” should be prohibited within them (PBS, 2009). Conversely, Pinchot was a staunch conservationist and utilitarian, meaning that he believed “the best way to protect the forests was to manage their use, not leave them alone,” (PBS, 2009). He wanted America’s forests to be strategically harvested as material for the nation’s expansion and development, while conserving parts for future generations and development. His beliefs and actions can be summed up with one of his favorite sayings, that he was trying to promote “the greatest good for the greatest number,” (PBS, 2009). It is important to note that at that time in American history, the late 1800s to early 1900s, views like Muir’s were considered elitist due to a general lack of inaccessibility to the continent’s wilderness for the average American. Adequate infrastructure was yet to be built, meaning that most American’s could only dream of traveling to the

places that Muir would describe in his writings. The idea that they should remain untouched for the sake of nature itself was hard to understand for politicians and citizens of that time, especially when they had not seen it for themselves. For this reason most Americans tended to support Pinchot's conservationism, believing that some natural sacrifices could be made for the sake of progress and expansion (Kuzmiak, 1991).

John Muir established the Sierra Club in 1892, an organization dedicated to the preservation and betterment of America's natural environment. Pinchot would become the nation's first chief of the United States Forest Service under President Roosevelt, a governmental organization made to manage the land and resources of American forests. The two sides clashed historically over the fate of Hetch Hetchy Valley, a portion of Yosemite National Park in Northern California. When the park was created in 1890, Hetch Hetchy Valley was supposed to be protected "in perpetuity," (Restore Hetch Hetchy, 2014). However, several politicians and stakeholders wanted to dam Hetch Hetchy, creating a water reservoir to serve the growing population of the Bay Area. The Sierra Club, led by John Muir, stood in opposition of them, citing the valley's beauty and importance to the surrounding environment. Muir called Hetch Hetchy a "remarkably exact counterpart" to what is now the world-famous Yosemite Valley, which lays just 15 miles to the south (Restore Hetch Hetchy, 2014).

Ultimately, politicians elected to build O'Shaughnessy Dam, capping Hetch Hetchy Valley and dealing "the most significant damage ever allowed in any of our national parks," (Restore Hetch Hetchy, 2014). The repercussions of this

decision are still felt in our contemporary environmental forums. Three years later in 1916, Congress would pass the National Park Service Act, creating the National Park Service to better protect and manage America's National Parks (Restore Hetch Hetchy, 2014). The Sierra Club went on from Hetch Hetchy to become perhaps the most influential environmental organization in the United States, playing major roles in court cases to uphold environmental legislation and preserve natural landscapes. Eventually, another conversation about protecting the environment would again gain traction in the 1960s, thanks in large part to Rachel Carson.

After decades of environmental destruction by corporations and their large factories and power plants, Carson investigated and uncovered connections between dangerous chemicals being released into the atmosphere and other pollutants into the environment with deadly effects to humans and wildlife. She released her novel, *Silent Spring*, in 1962, enlightening the population to these deadly effects of increasing industrialization and starting a fire of environmental reform (EPA, 2017). This fire of reform played a direct role in the foundation of the United States Environmental Protection Agency, or EPA, under President Nixon just eight years later in 1970 (EPA, 2017). The EPA's mission is "to protect human health and the environment," (EPA, 2017). They accomplish this by developing and enforcing regulations, giving grants, studying environmental issues, sponsoring partnerships, teaching people about the environment, and publishing information (EPA, 2017). One of the main sources of the EPA's regulatory power comes with the National Environmental Policy Act, or

NEPA, which was also signed into law in 1970. NEPA "requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions," (EPA, 2017). However, the extent of the EPA's authority and NEPA's effectiveness varies greatly with each presidential administration. As it stands currently in 2020, the EPA has lost much of the authority and prowess it once had.

California, the setting for the National Park City proposal in the latter portion of this project, has gone even further with its environmental regulations. After the federal government passed the National Environmental Protection Act in 1970, the California State Assembly "created the Assembly Select Committee on Environmental Quality to study the possibility of supplementing NEPA through state law," (Association of Environmental Professionals, 2016). They issued a report titled the Environmental Bill of Rights, which would lead to Governor Reagan signing the California Environmental Quality Act statute in 1970 (Association of Environmental Professionals, 2016). CEQA, as it is commonly known, is the first case of a state creating its own "mini-NEPA," and was passed to "identify and reduce the environmental impacts of new state projects, attempting to expand the factors balanced in decision-making, and add environmental goals to economic and social goals," (Association of Environmental Professionals, 2016).

Today, CEQA carries more regulatory authority than NEPA, as it was expanded "during the 1970s to include all California development proposals - public or private - that are subject to the discretionary approval of a public agency," (Association of Environmental Professionals, 2016). CEQA

requires more scrutiny and mitigation factors than NEPA, and is widely considered the most intense piece of environmental legislation in the country (Association of Environmental Professionals, 2016).

Environmentalism in Planning

Environmentalism has a long history in urban planning as well. Some early influences include figures like Ebenezer Howard, whose 1902 essay *Garden Cities of To-morrow* started a unique movement in planning that saw new towns developed around the concept of the three magnets that drew people to different aspects of life, "town, country, and town-country," (Howard, 1946). Radial townships were planned around central parks, with broad avenues connecting land uses (Howard, 1946). Howard recognized the human need for natural spaces in their urban environments, both for recreation and agriculture.

Another key environmental figure in urban planning and landscape architecture is Frederick Law Olmsted. Olmsted is widely known for his work revolutionizing the idea of the park system, a device used to create connections between parks throughout urban landscapes and place greenbelts throughout cities (Rome, 2017). Some of his most famous works with park systems include Boston, Massachusetts and Buffalo, New York. Today parks are commonly thought of as amenities, but Olmsted saw them as "forces for social change," (Rome, 2017). He believed that parks would have a "harmonizing and refining influence" on a population that was becoming increasingly urban through time (Rome, 2017). Olmsted's park system concept has even influenced the contents of this report. In the proposal to make San

Luis Obispo a National Park City, many of the conceptual projects presented are essentially elaborate park systems designed to connect green spaces within the City.

Another key figure in environmental planning is Ian McHarg. McHarg spent years studying landscape architecture and urban planning at Yale and Penn, and was later mentored by Lewis Mumford. Through these experiences he began to “move away from the aesthetic dogma of the international style,” growing “highly skeptical of the one-size-fits-all stylistic pattern of modernism,” while still remaining committed to the ideals behind modernism (Steiner, 2004). He believed that “knowledge should guide action,” and that this should result in “better housing, more open space, more efficient transportation systems, and, in the end, healthier and safer communities,” (Steiner, 2004). He presented his ideas in his 1960s television show, *The House We Live In*, and his 1969 book, *Design with Nature* (Steiner, 2004). He revolutionized at the time a new practice at the time in environmental and land use planning, in which he would gather environmental data in the form of map layers for specific regions, and layer them to discover which areas were the most suitable for development. He performed this technique once on New York’s Staten Island, uncovering areas of the island that he believed were best suited for urban development. In the aftermath of Hurricane Sandy in 2012, maps of damaged areas proved his prediction to be true (Steiner, 2004). Although his contributions at times go largely unattributed, his map layering technique was one of the pioneer’s ahead of today’s geographic information systems, or GIS, a system that planners rely on heavily for environmental impact reports

and assessments (Steiner, 2004).

It is essential to understand the history of environmentalism across society and in specific regards to planning before we can truly understand how the novel concept of National Park Cities came to be, and the impact that it might have. The National Park City movement and its founder, Daniel Raven-Ellison, have the opportunity to be included in the next chapter of the history of great environmental movements.

The National Park City Concept

After years of campaigning by Daniel Raven-Ellison, London Mayor Sadiq Khan signed the London National Park City Charter on July 22, 2019, introducing the world to a sustainable phenomenon unlike any other. London officially became the world’s first National Park City, a concept dedicated to “making cities greener, healthier, and wilder,” (National Geographic, 2019). Raven-Ellison is a geographer and National Geographic explorer passionate about sustainability and founded the National Park City Foundation (NPCF) to spearhead the movement (National Geographic, 2019). What it means to be a National Park City is still being formally worked out, and as with nature it appears that each National Park City will have a unique definition specific to its regional context.

While every future National Park City will have unique elements representing its varying values and natural features, each will share a common vision statement. The National Park City Foundation’s website states that a National Park City is

“a place, a vision, and a community. It is a city that is cared for through both formal and informal means to

enhance its living landscape. A defining feature is the widespread and significant commitment of residents, visitors, and decision-makers to act so people, culture, and natural processes provide a foundation for a better life,” (National Park City Foundation, 2019).

The NPCF is in the process of setting a framework for more cities to attain National Park City status. Each will need to sign a charter that lays out their “vision, aims, values, and an action plan” with their Partnership (NPCF, 2019). This action plan will have elements that remain in place for long periods of time but will also feature parts that will be changed and updated frequently, reflecting the atmosphere of that time both politically and naturally. The Foundation emphasizes that a National Park City is “a place, a vision, a community, and a way of organizing,” (NPCF, 2019). This last part, “a way of organizing,” is what will allow this constant change with time (NPCF, 2019). For example, in London a National Park City Network and Partnership are being formed between different interest groups, organizations, and nonprofits, with the Partnership often taking a significant leadership role (NPCF, 2019). These organizations drive civic involvement in the National Park City movement by taking part in campaigns that encourage good practices, galvanizing a shared vision, and educating the public about the health ramifications behind a positive relationship to nature (NPCF, 2019).

In London, the Partnership will be governed by a London National Park City Charter, a document that determines the “visions, aims, and values” of a National Park City (NPCF, 2019). The Charter lays out each

goal that the National Park City has for its future. London National Park City has seven goals, and all of them are related to the betterment of life in the City (Charter, 2019). These include working towards better “lives, health, and wellbeing,” as well as better “relationships with nature and each other,” (Charter, 2019). The Charter can be thought of as a General Plan, with goals serving as guidelines for future policies and developments that will shape the sustainable path of the City.

Future National Park Cities can follow suit by working with the NPCF to draft their own Charter, or by starting with the Universal Charter for National Park Cities. This is a document that the Foundation has released outlining goals for everyone to take their first steps. People can sign the Universal Charter as well, showing that they have the “ambition, responsibility, and power” to work towards achieving the goals they envision for their city (Charter, 2019). For a grassroots movement, regular citizens taking action like this is essential. The movement towards becoming a National Park City would have never succeeded if it were not for people who care enough about their environment to start changing their city around them for the better. Similarly, a movement based in abstract concepts like this new phenomenon would have no real power if ordinary people living in the City did not care enough to implement and enforce these new sustainable projects and policies.



Image 1.1: NPCF Logo (NPCF, 2019)

02

London as a National Park City

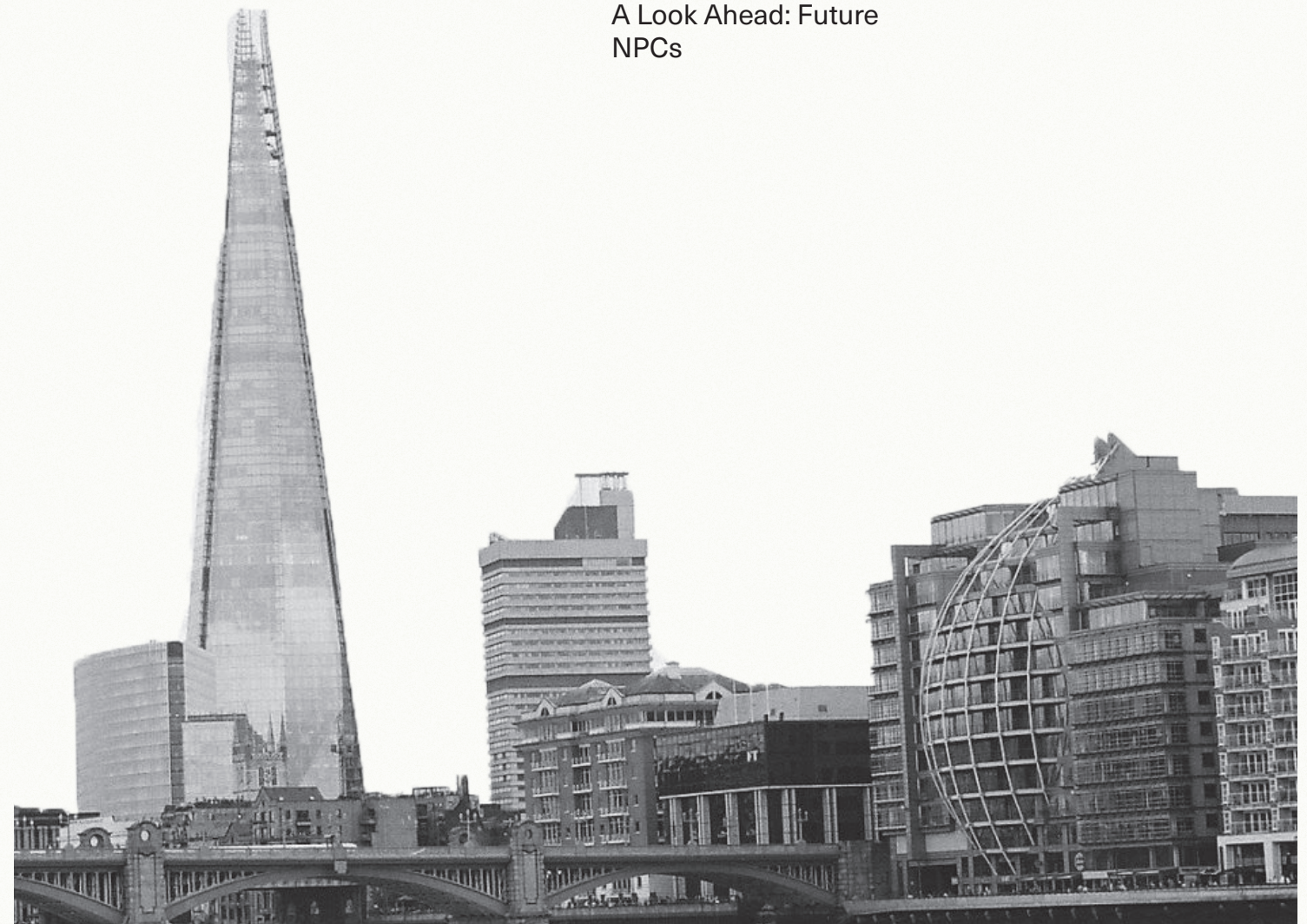
Becoming the First
NPC

Implementation

Impacts: Social,
Environmental, Economic

A Look Ahead: Future
NPCs

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As it stands, only one National Park City officially exists in the world today. London became the first to achieve this mark on July 22, 2019 when Mayor Sadiq Khan signed the London National Park City Charter at City Hall. To celebrate, the London Assembly held a festival that lasted nine days, called the National Park City Festival. The Assembly estimates that more than 90,000 people enjoyed 317 free events, made possible by more than 800 volunteers (London National Park City, 2020). The Assembly also cites a study that estimates London avoids around “£950 million per year in health costs due to the benefits Londoners gain from using green spaces,” (London National Park City, 2020), which translates to more than \$1.2 billion. The creation of the London National Park City has resulted in countless social, environmental, and economic impacts like this one. This chapter will take a further look at these interrelated impacts, the events that lead up to the foundation of the world’s first National Park City, as well as what cities might be the next one to achieve this status.

Becoming the First NPC

While the campaign to make London the world’s first National Park City has drawn inspiration from past environmental movements dating back to the 19th Century, the specific question, “what if we made London a National Park City?” was first asked by founder Daniel Raven-Ellison in 2013 (Timeline, 2019). With this question Raven-Ellison, a National Geographic explorer, was trying to understand why an urban landscape with all its parks and open spaces had not been included within the traditional family of national parks (Timeline, 2019). A year before this question in 2012, the

All London Green Grid was established to “protect, conserve and enhance London’s network of green and open natural and cultural spaces,” (Timeline, 2019). Policies and programs like the All London Green Grid played an essential role in paving the way for London to become the world’s first National Park City.

The official campaign to make London an NPC started in 2014 with the creation of a simple website acting as a guide to what the National Park City Foundation then called the Greater London National Park, with a note explaining it was “officially only a notional park” at the time (Timeline, 2019). Shortly thereafter the movement gained its first official backing from the Royal Borough of Kingston council, followed shortly afterwards by the boroughs of Ealing and Sutton (Timeline, 2019).

The campaign’s first official event was held in 2015 at London’s Southbank Centre. Over 600 people attended the event, and were asked to reflect on the question, “What if we made London a National Park City?” (Timeline, 2019). By the end of the event, nine out of ten attendees polled said that they support the “idea of a London National Park City,” and 347 individuals and organizations contributed “towards a crowdfunded and collaboratively written proposal for the ‘Greater London National Park City,’” (Timeline, 2019). Following this event, people returned to their respective parts of London and began asking their local politicians to support the proposal (Timeline, 2019).

The movement received a major boost in 2016 when all of London’s mayoral candidates announced their open support of a London National Park City (Timeline, 2019). Also in 2016, another event was held

in the Southbank Centre titled “Let’s make London a National Park City” with more than 1,000 people in attendance (Timeline, 2019). Meetings and events like this continued to be held throughout the next few years while official campaigners spent time securing “support across the capital by writing emails, organizing events and giving talks,” (Timeline, 2019). By the end of 2017, more than 1,000 local politicians from each of the City’s main political parties had given their support to make London a National Park City (Timeline, 2019).

In March 2018 years of hard work and campaigning came to fruition when it was officially announced that London would become the world’s first National Park City in 2019, following the confirmation “that the majority of the city’s locally elected politicians and the Mayor of London had declared their support” for the idea (Timeline, 2019). A map is shown below, illustrating which wards and boroughs throughout the City supported the London NPC campaign. Later that year in July, London announced in partnership with the

National Park City Foundation that nearly 300 events organized by the mayor would take place across the capital for “National Park City Week,” an event to celebrate the launch of the London National Park City in the summer of 2019 (Timeline, 2019).

Ahead of the official launch of the London NPC, March 2019 saw a completely crowdsourced, newspaper-sized guide, the *National Park City Maker*, was published and distributed showing citizens how to make “London life greener, healthier, wilder and better in so many ways,” (Timeline, 2019). The goal of the guide was to provide “the inspiration and advice needed to start transforming” London into a National Park City (Timeline, 2019). Later that year from July 20th through 28th, the London National Park City Festival celebrated the official start of London National Park City, with Mayor Sadiq Khan signing the charter on July 22nd. The Festival was a “celebration of London’s outdoor spaces involving a broad range of activities, from culture and health and fitness to wildlife and the environment,” (Timeline, 2019).

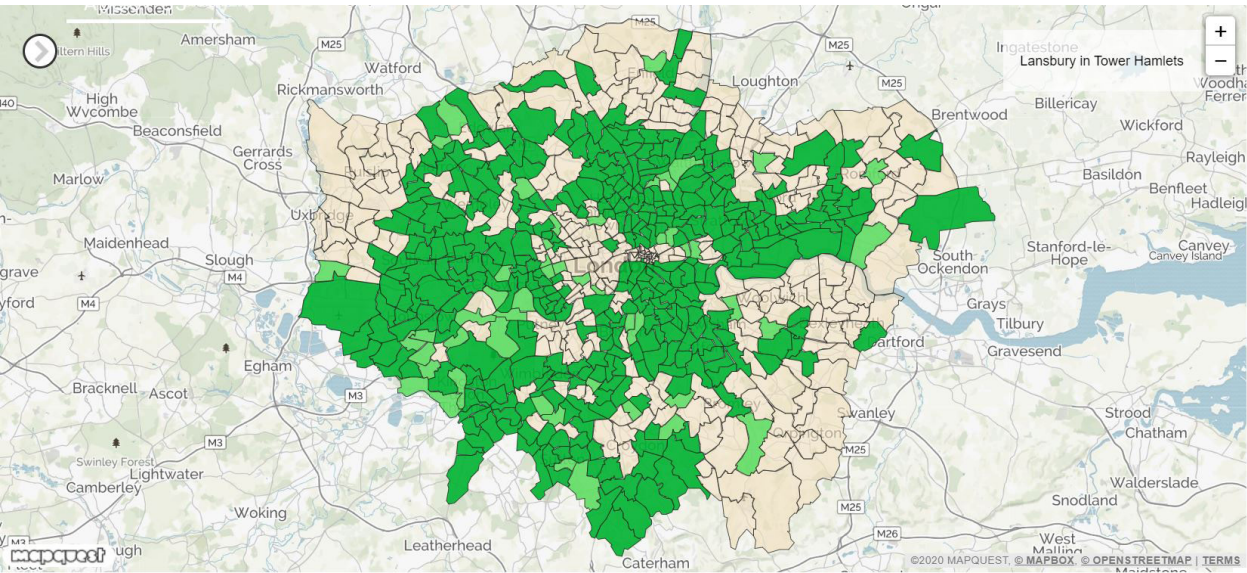


Image 2.1: A political support map of London NPC, showing the approval of 361 wards and 33 boroughs across the City (Timeline, 2019).

This was the realization of the National Park City Week originally planned in July 2018, with around 300 events taking place across London to celebrate this historic moment in environmental activism history.

Implementation

The London Assembly states that as a National Park City, London will be “a city which is greener in the long-term than it is today and where people and nature are better connected,” (London National Park City, 2020). Along with the London National Park City Charter, the Assembly has identified three major policy documents that will help guide London to the realization of this vision statement. The first is the London Environment Strategy, a policy document that roughly resembles what a Sustainability Element would look like in a general plan. The Plan “sets out how a National Park City will protect and improve London’s green infrastructure and natural capital, alongside other vitally important environmental objects such as improving air quality and becoming a zero carbon city,” (London National Park City, 2020).

The second document that the Assembly has identified is the London Plan. Essentially, this document is equivalent to a general plan in a Californian city. The Plan “includes policies on protecting the Green Belt, parks and natural habitats, and greening buildings and the public realm so that development contributes to an environmental net gain,” (London National Park City, 2020). The Plan is updated regularly in intervals ranging from two to four years. In future updates it will make specific references to how the Mayor and planners are implementing sustainable policies in accordance with the London

National Park City Charter and vision statement (London National Park City, 2020).

Lastly, the Mayor’s Transportation Strategy lays out how the City plans to invest in cycling and walking infrastructure, promoting healthy streets and active transportation (London National Park City, 2020). London’s local government realizes the potential transportation has to affect the shape of the City, and uses the Healthy Streets Approach to “prioritize human health and experience in planning the city,” (London National Park City, 2020). This strategy involves a focus on three main themes that get right to the heart of the matter. The first theme is “Healthy Streets and healthy people,” which aims to create “streets and street networks that encourage walking, cycling and public transport use” that will “reduce car dependency and the health problems it creates,” (London National Park City, 2020). The second theme is “A good public transport experience,” an objective that is trying to “dramatically reduce” the number of vehicles on the streets of London (London National Park City, 2020). The third and final theme of the Healthy Streets Approach is “New homes and jobs,” (London National Park City, 2020). This theme is concerned with smart growth as more people move into London and look for jobs. The Assembly believes that planning the City “around walking, cycling, and public transport will unlock growth in new areas that ensure London grows in a way that benefits everyone,” (London National Park City, 2020). All of these themes promote environmental responsibility amongst London’s policy decision makers, while also directly aligning with the National Park City Foundation’s vision for the City. Adhering to these strategies will ensure that London will be a city that “is greener in the long-

term... protects the core network of parks and green spaces... is rich in wildlife... and where all can enjoy high-quality green spaces," (London National Park City, 2020).

Impacts: Social, Environmental, Economic

Social

A large part of the social impact London National Park City has had in its early life so far has been efforts to change the paradigm through which patrons of the City see their urban landscape. Projects and events around London are hoping to get people to think of the built environment as a natural extension of the environment, rather than something existing at odds within it. An excellent example of this attempted paradigm shift is the Greenground Map, designed by graphic designer Helen Illus (Ledsom, 2019). The Greenground Map takes inspiration from the classic London Tube map and acts as “an alternative sustainable transport map,” (The Greenground Map by Helen Illus, 2019). Stops on the map that are usually denoted by manmade objects like buildings, streets, and monuments instead are shown with nearby green infrastructure features like parks, ferry piers, and even kayaking and swimming spots (Ledsom, 2019). In addition to replacing the names denoting stops, a green line has been added that represents “the connections between parks that could be walked and cycled,” (The Greenground Map by Helen Illus, 2019). So far, the map already includes “300 parks and 12 green and blue lines,” (The Greenground Map by Helen Illus, 2019). The NPCF explains that the map is “mostly an experiment to represent London’s green spaces as accessible... for Londoners, inspiring to take alternative, green routes for commute or leisure,” (The Greenground Map by

Helen Ilus, 2019). People may not know that such green and sustainable routes exist, and the Greenground map raises awareness to some of the transportation modes that a National Park City has to offer, changing the way they view their urban landscape. It is possible that in the future the Greenground system could “evolve into real routes,” helped by the development of a phone application or other technology that makes these alternative routes more known to commuters (The Greenground Map by Helen Ilus, 2019). The Greenground Map is included on the next page of this report, page 27, for reference.

More social impacts exist as a result of the London National Park City movement as a result of new green recreational activities becoming available thanks to new funding sources and opportunities. At this point, London has opened up a new “swimming lake, a 23-kilometer cycleway, a new wetland and 18 hectares of riverways,” for residents to enjoy (Ledsom, 2019). New open spaces and recreational opportunities like these are meant to emphasize that not only is it home to “8.6 million people, London is home to more than 8.3 million trees and 14,000 species of wildlife,” (Ledsom, 2019). Londoners are starting to think of their City as more than a place for people, but as a sanctuary for the urban wildlife around them. This was driven home by events like the National Park City Festival, which highlighted the need for increased sustainability and harmony with the City’s natural features (Timeline, 2019). Londoners are increasingly taking on the social responsibilities of being stewards of the environment around them.

Environmental

The creation of London National Park City

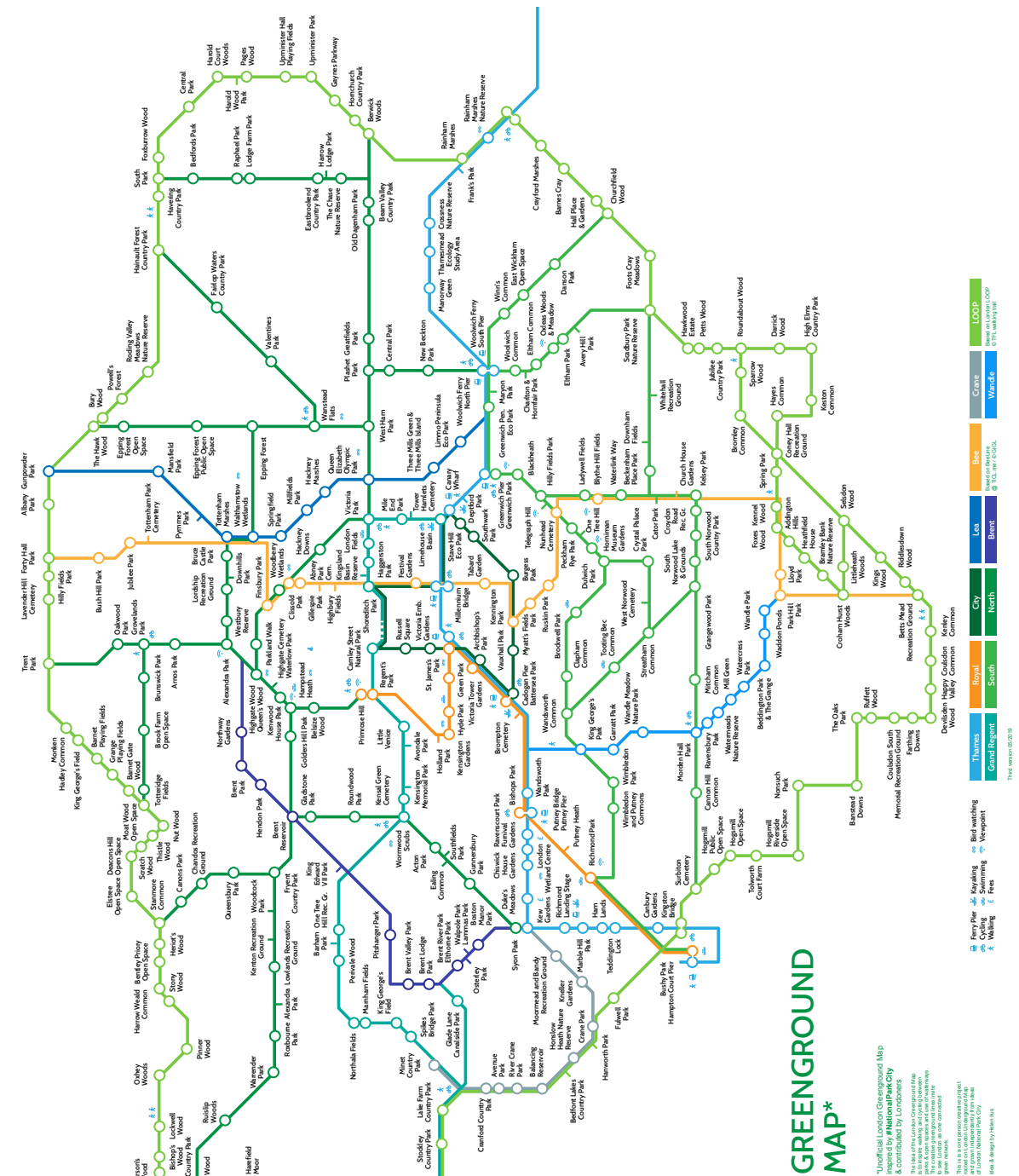


Image 2.2: The Greenground Map by Helen Ilus, showing 300 parks as well as 12 green and blue lines already in place (The Greenground Map by Helen Ilus, 2019).

has had a tremendously positive effect on the natural environment, both within the City and around it. However, less than a year away from the NPC's birth, data that includes specific statistics about environmental benefits like better air quality, fewer greenhouse gas emissions, and reduced waste have yet to be recorded. Solid data that provides an accurate depiction of an environment under study will take years to accumulate.

In the meantime, London National Park City's environmental impact can be measured by projects that have already been implemented or are in the pipeline. As previously mentioned, the City has already established a new swimming lake, a 23 kilometer bike path, a new wetland within the City, and 18 hectares of riverways for wildlife and recreation (Ledsom, 2019). London is already estimated to have around 3.8 million gardens within its borders, covering about 24% of the City (Ledsom, 2019). New policies put in place by London's National Park City status will preserve these parks and create opportunities for more, rather than see them be eradicated by parking lots (Ledsom, 2019).

London's status as a National Park City has also led to the creation of new grant opportunities that have directly funded more than 250 sustainable projects around the City (Greener City Fund, 2019). A map of these projects is included on page 25 of this report. These projects include the creation of a new woodland, naturalizing portions of urban parks back to their original forms, and planting hundreds of trees around the City (Green Capital Grants, 2019). Some of these projects promote sustainability as well as an anthropologic purpose at the same time. For example, one grant funded project will "significantly improve the quality of Silkstream Park and Montrose Playing Fields which were underused and considered unsafe by residents," (Green Capital Grants, 2019). Part of these improvements mean naturalizing a river bank featured in the park, reducing flood risk to nearby residents and restoring natural habitat for wildlife (Greener City Fund, 2019). A rendering of these improvements is included below. A more in-depth discussion of these grant opportunities will directly follow this section.

While meaningful environmental data might



Image 2.3: A diagram of the improvements being made to Silkstream Park and the Montrose Playing Fields in the borough of Barnet (Green Capital Grants, 2019).

not be ready today, the National Park City Foundation has a plan for the future. They envision the release of a State of the National Park City Report that will "be a way to track collective progress toward achieving" their goal to "make life better in cities," (FAQ, 2019). The Report will "reveal data that relate to the National Park City's objectives," and "will be used to inform the London National Park City Partnership's progress, decision making, and activities," (FAQ, 2019). Some of the categories that will be covered by the Report include air quality, biodiversity, local food growing, volunteering, water quality, outdoor learning in schools, community engagement, and key mental health outcomes (FAQ, 2019). In addition to Reports for each National Park City, a separate State of the National Park Cities Report will be compiled to "track progress within and between cities," (FAQ, 2019).

Economic

Being a National Park City has had an impact on London's economy in several ways. After officially declaring London a National Park City, Mayor Sadiq Khan further contributed to the movement's success by creating the £12 million Greener City Fund. The ultimate purpose of this fund is to contribute funding to projects that will help achieve the City's goal of more than half of its area being green by 2050 (Greener City Fund, 2019). So far, this has been accomplished by the funding of a few significant projects. Community Tree Planting and Green Space Grants have awarded almost £5 million since 2017 to more than 250 tree planting projects (Greener City Fund, 2019). The fund has also put £3 million into "major projects that bring a range of environmental benefits," which includes a £2.1 million Green Capital



Image 2.4: Greener City Fund map indicating projects funded since 2016. Each circle is sized according to the scale of the project and how much funding it received (Green Capital Grants, 2019).

grant that has supported six “large-scale green space projects” starting in the summer of 2018 (Greener City Fund, 2019). The improvements to Silkstream Park and the Montrose Playing Fields mentioned in the previous section are one of the six projects funded by the Green Capital grant. Additionally, around £800,000 have been allocated to nine projects through the Good Growth Fund, which aims to increase the greening capacity of the existing built environment (Greener City Fund, 2019).

The Greener City Fund has also contributed to London’s urban forest, allocating £3 million in funds to support street tree planting and receive better data about London’s existing trees. This includes £1.5 million to help create new woodlands within the City (Greener City Fund, 2019). These funds also “support street tree planting,” as well as “improve data about London’s trees and support London-wide projects,” (Greener City Fund, 2019). So far, 40,000 trees have been planted through 34 funded projects during the winter of 2019-2020 alone (Greener City Fund, 2019). Additionally, this extensive Greener City Fund has contributed £1 million toward community engagement, working “with partners and Londoners on a range of community and public engagement programs including the National Park City Festival in 2019,” (Greener City Fund, 2019).

Another grant opportunity created by Mayor Khan are Community Green Space Grants. These grants have awarded £1.1 million to “54 community projects to improve and create green space in 2020,” (Greener City Fund, 2019). Funding opportunities like these relate directly to the City’s goal of transforming half of its area to green spaces by the year 2050, and perfectly illustrate the relationship between social,

environmental, and economic impacts that an idea can have on a society.

This relationship is also highlighted by the Good Growth Fund, which focuses on greening or regeneration projects (Good Growth Fund: Greening Projects, 2019). Briefly mentioned earlier, this fund sets aside more than £800,000 “to provide additional greening to seven regeneration projects and to fund green infrastructure audits on two development projects,” (Good Growth Fund: Greening Projects, 2019). The main objective of the fund is to green “the public realm, particularly in areas with little existing green cover,” (Good Growth Fund: Greening Projects, 2019). One of the projects funded by this fund is the revitalization of Queen’s Crescent, an important public space in the Gospel Oak community of Camden, a London borough. Designers are working closely with the community to “co-design the improvements,” which will “transform the busy road space into a high quality public space with increased greenery including trees, sustainable drainage features such as rain gardens, and new ‘pocket’ green spaces,” (Good Growth Fund: Greening Projects, 2019). This again demonstrates the interrelationship between the social, environmental, and economic impacts sparked by the creation of the London National Park City.

A look ahead: Future NPCs

Just months after the National Park City Foundation’s first success with London, they are already looking ahead towards creating more National Park Cities around the world. To help future National Park Cities, the NPCF has drafted a Universal Charter for National Park Cities as a starting point for fledgling NPCs (Future National

Park Cities?, 2019). This Universal Charter outlines clear goals and a general vision statement for each potential city, and includes a brief section of information explaining what National Park Cities are and could be (Future National Park Cities?, 2019). Additionally, the Universal Charter’s online format offers a section for people to sign the Charter and show their support for the movement (Future National Park Cities?, 2019).

Glasgow, Scotland

The first city that the National Park City Foundation has identified as a potential future NPC is Glasgow, Scotland. The Glasgow National Park City Group has signed the Universal Charter for National Park Cities and decided upon a set of goals and initiatives to have the movement gain more traction among city residents and government leaders. Some of these actions include establishing a strong online presence to act as the hub for the campaign,” and working “with partners to develop and encourage new National Park City demonstration projects,” (Glasgow National Park City, 2019). This movement is still in its early beginnings, and as of yet is just a group of individuals that are interested in creating a Glasgow National Park City. The group has made it clear that they do not have any political affiliations or alignments with any other organizations (Glasgow National Park City, 2019). However, the Glasgow National Park City Group does have a strong showing of supporters that includes the University of Glasgow Zoological Society, the Nature Library, Venture Scotland, Urban Roots, and more (Future National Park Cities?, 2019).



Image 2.5: Glasgow NPC logo (Glasgow National Park City, 2019).

Adelaide, Australia

The first potential city that the National Park City Foundation has paired with outside of the United Kingdom is Adelaide, Australia. This campaign has been spearheaded by South Australia’s Minister for Environment and Resources, David Speirs (Future National Park Cities?, 2019). Speirs spoke at the National Park City Summit that launched London as the first NPC, and the Adelaide movement came about just after the city hosted the second international forum on National Park Cities in 2019 (Future National Park Cities?, 2019). Part of Speirs’s approach has been to create Green Adelaide, “a new approach to managing our urban environment,” (Green Adelaide, 2017). Through the state government, Green Adelaide is focusing on “efforts to green and cool” backyards, “streets and neighborhoods, enhance biodiversity and create open and healthy green spaces for everyone” in metropolitan Adelaide (Green Adelaide, 2017). Green Adelaide is also trying to establish a National Park City within the potential National Park City, called Glenthorne National Park. This will incorporate several surrounding municipal parks and Glenthorne Farm, an old farm within the city that has been unused and undeveloped for years (Green Adelaide, 2017).



Image 2.6: Green Adelaide logo (Green Adelaide, 2017).

Galway, Ireland

Across St. George's Channel from London lies another potential National Park City in the United Kingdom, in Galway, Ireland. This campaign was launched in May 2019, just before London officially became the world's first NPC in July. Lead by "veteran environmental campaigner" Brendan Smith, Galway's movement focuses on the dire circumstances of global climate change and humanity's apparent tendency to become "disconnected with nature" at times (Corrigan, 2019). The campaign was launched with events "celebrating the raft of ecological and environmental projects already underway across the city and county," (Corrigan, 2019). Galway is a city famous for its "two big pillars, technology and the arts," and Smith wants to add a third pillar, being "green" (Corrigan, 2019). Galway National Park City would merge these three pillars, combining new recreational activities with environmental research programs at the Insight Centre for Data Analytics at the National University of Ireland, Galway, which is also the location of the campaign's launch festivities (Corrigan, 2019). At this event, scientists from the university shared with attendees projects that they have been working on to help promote "citizen science," including the

creation of "a mobile lab with 50 sensors monitoring the atmosphere; an app to identify species of mushrooms; outdoor classrooms and laboratories;... and using an app to collect tree data," (Corrigan, 2019). With the help of regular citizens, Galway National Park City would be centered on climate research and environmental action.



Image 2.7: Organizers campaigning to make Galway an NPC (Corrigan, 2019).

Newcastle, England

England is home to another potential National Park City, Newcastle upon Tyne. James Cross, the chief executive of the Newcastle Parks and Allotments Trust, said that "becoming a National Park City signals our commitment to make life better for people and nature," (Future National Park Cities?, 2019). The Trust has rebranded itself as Urban Green Newcastle, and kick started their campaign to make Newcastle the next NPC by securing 33 parks and 61 allotments from the Newcastle City Council, an organization struggling to come up with funding to renovate and maintain the city's parks and open space, many of which were established in the Victorian Era (Holland, 2019). Urban Green Newcastle has revealed a plan that puts £2 million towards park upgrades over the next five years, inspired in part by a friendly competition to reach National Park City

status before Adelaide, another potential NPC discussed previously in this section (Holland, 2019). Urban Green Newcastle is the first non-profit organization of its kind in England and was started with the help of a £9 million bond from the Newcastle City Council. The city hopes that within ten years the organization will become self-sufficient and "save local taxpayers up to £10 million," (Holland, 2019).



Image 2.8: Urban Green Newcastle logo (Holland, 2019).

Wales, United Kingdom

The National Park City movement in Wales launched officially on November 6, 2019. The main event of the launch ceremony was a speech by London National Park City's founder, Daniel Raven-Ellison, where he laid out in detail London's transformation into an NPC as an example of how the process might look in a Welsh city (The Launch, 2019). The National Park City movement in Wales is so young that leaders of the organization have not yet officially selected a city that they will campaign for. At the launch event, panels were held discussing the potential of the cities of Swansea and Cardiff, as well as a potential Valleys Urban Regional Park that would span multiple urban centers in Wales's Valleys region (The Launch, 2019).

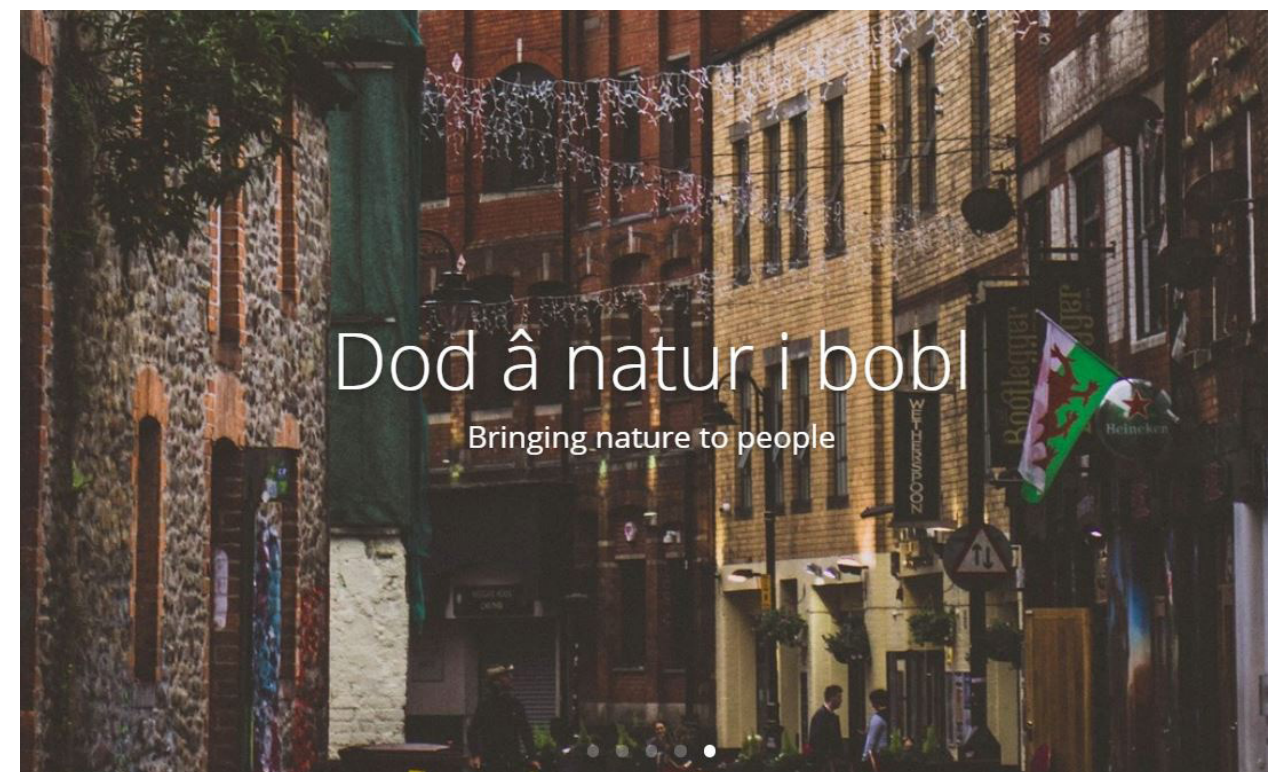


Image 2.9: A slogan of the Wales NPC, "Bringing nature to people" (Future National Park Cities, 2019).



03

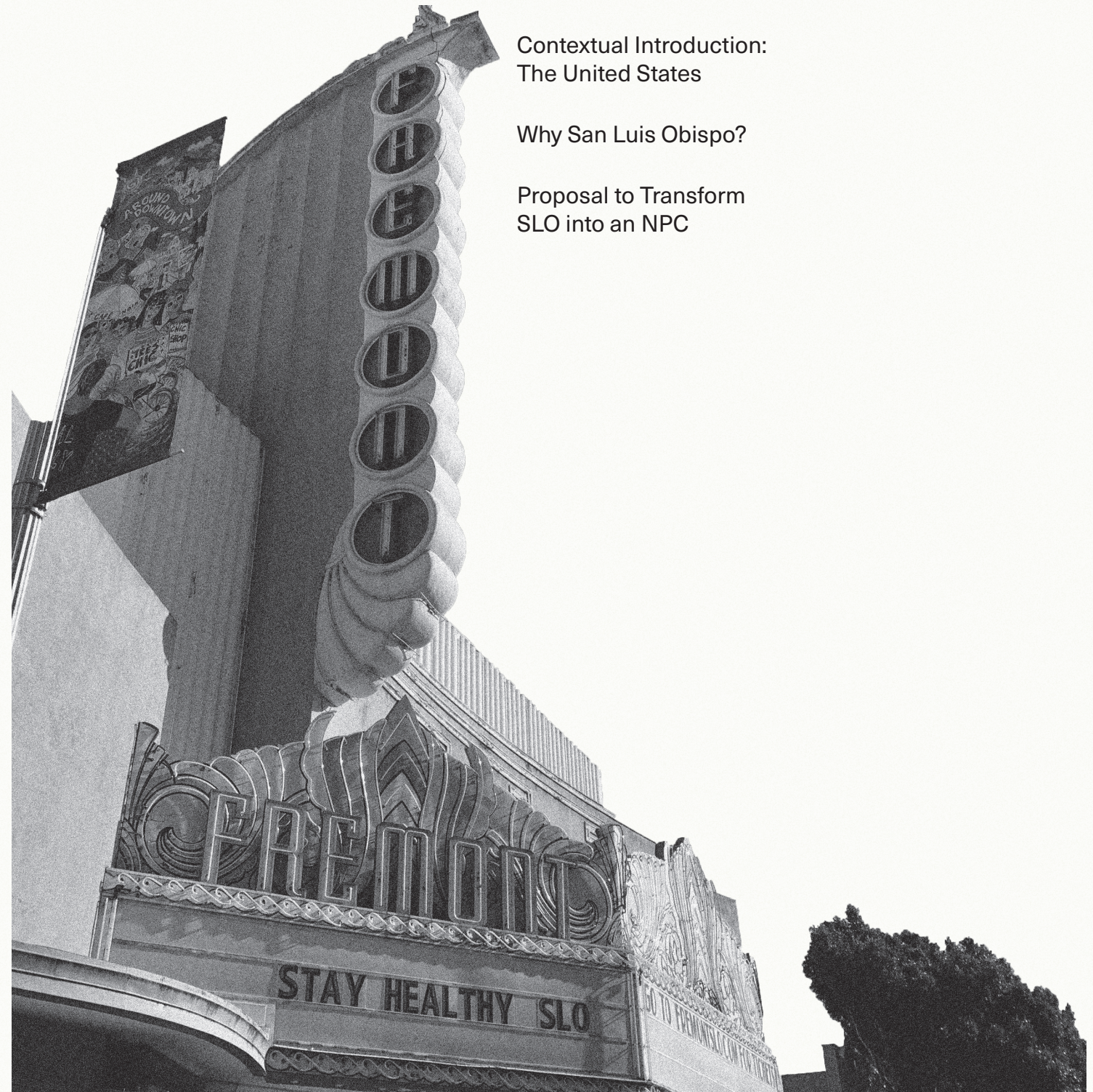
San Luis Obispo as a National Park City

Contextual Introduction:
The United States

Why San Luis Obispo?

Proposal to Transform
SLO into an NPC

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National Parks exist in countries all over the world, but in the United States they embody something entirely unique and distinct from the rest of the world. They are emblazoned in American culture, serving not only as a favorite recreational pastime, but as a symbol of the United States itself in the minds of Americans and people across the globe. This is perhaps illustrated best by Wallace Stegner, an American novelist and environmentalist, when he declared that national parks are “America’s best idea,” saying that they are “Absolutely American, absolutely democratic, they reflect us at our best rather than our worst,” (Nagan-Powell, 2020).

America’s obsession with its national parks has as much to do with its spirit and democratic values as it does with its short history as a young nation. Europe, the setting of the world’s first National Park City, is rich with historic buildings and other physical landmarks denoting centuries of progress and struggle. Meanwhile the United States is still a relatively young nation, falling just shy of 250 years old. Accordingly, many early writers and supporters of national parks compared places like Yellowstone and Sequoia National Parks “to cathedrals and monuments in Europe,” (Nagan-Powell, 2020). If Europe’s historic manmade landmarks are “testaments to the greatness of royalty and intellect,” America’s national parks are “testaments to the country’s scale and spirit of independence,” (Nagan-Powell, 2020). Further, Europe’s buildings embody “exclusion and wealth,” whereas America’s natural landscapes embody “democracy and wonderment,” (Nagan-Powell, 2020). This reverence that American’s hold for their national parks defines the potential that this idea of National Park Cities could in the United States.

The City of San Luis Obispo is home to 46,548 residents in 13.2 square miles of land in California’s beautiful Central Coast region. Residents of the City are “proud of its natural setting,” and take advantage of all the outdoor activities it has to offer (Natural Resources, 2020). A Mediterranean climate offers perfect weather nearly year-round for residents and visitors alike to enjoy the City’s 28 parks, 55 miles of hiking trails, 3,775 acres of open space in 12 distinct lands, and 41.2 miles of bike lanes (City at a Glance, 2020). The City of San Luis Obispo serves as the main center of San Luis Obispo County, for both business and natural resources. Nature can be explored and enjoyed in all parts of the County, thanks to places like Montaña de Oro State Park, the Morro Bay National Estuary, the Oceano Dunes Natural Preserve, the Nine Sisters mountain range, and more than 80 miles of beaches and coastline.



Image 3.1: Montaña de Oro State Park, captured by Erik Valentine.

Outdoor recreation in all its forms provided by the City are also enjoyed by students of the adjacent California Polytechnic State University, San Luis Obispo, or Cal Poly. In the Fall of 2018, Cal Poly had a total enrollment of 21,812 students, bringing San Luis Obispo's population closer to 70,000 people during the academic year (Cal Poly Quick Facts, 2020). The City of San Luis Obispo's relationship with Cal Poly and nearby Cuesta College has earned it the reputation of being a great college town, and the best in California according to an article published in The Tribune in 2018 (Clark, 2018).

Additionally, San Luis Obispo has received national acclaim thanks to television host and celebrity Oprah Winfrey, who named the City "America's happiest city," back in 2011 (The Oprah Winfrey Show, 2011). Reason's she listed for this lofty title include Downtown San Luis Obispo's pedestrian atmosphere thanks to wide sidewalks and limited traffic, then ban on public smoking established by the City in 1990, and the complete restriction of drive-through restaurants that promote healthier food

options (The Oprah Winfrey Show, 2011). The City of San Luis Obispo also prides itself on being one of the most sustainably minded and environmentally progressive cities in America. In January 2020, San Luis Obispo received the "Sustainable City of the Year" award from Green Builder Magazine for its small municipalities category because of the City's commitment to be completely carbon neutral by the year 2035 (Deegan, 2020). Carbon neutrality by 2035 is a lofty goal that the City has been contemplating for a long time, and when the decision to move forward with it was finalized in 2018 it became the first city in the nation to set a timeline for such an achievement (Climate Action, 2020). As laid out by the City's Climate Action Plan, this goal is being addressed with the installation of electric vehicle charging stations, the adoption of a sustainably oriented Zoning Code, and by joining Monterey Bay Community Power in January 2020 (Climate Action, 2020). The decision to join Monterey Bay Community Power means leaving behind the City's former energy source, the Diablo Canyon Power Plant, a nuclear energy facility



Image 3.2: View of San Luis Obispo from Reservoir Canyon, taken by Erik Valentine.

situated on the coast to the west of San Luis Obispo.

Another way that San Luis Obispo is making strides towards achieving its carbon neutral goal is through the implementation of a new 10,000 tree planting initiative, just announced by the City Council on December 3, 2019 (Johnson, 2019). Combined with other plans set forth in the meeting, this initiative is estimated to bring the City close to 70% of the way to its 2035 goal (Johnson, 2019). Through these initiatives and programs, City staff have shown their commitment to actually achieving the City's sustainability goals.

San Luis Obispo's proximity to an abundance of natural landmarks and state parks, a strong college student population committed to environmental stewardship and activism, and a community backed by local leadership open to climate action all combine to make the City an optimal candidate to become the United States' first National Park City.

Proposal to Transform SLO into an NPC

This section will be the development of a proposal to make San Luis Obispo, California a National Park City, the first one to be established in the United States. This process will involve drafting goals for what would be San Luis Obispo's National Park City Charter. These goals should work alongside the City's existing goals and direct future policy decisions and implementation measures to help achieve these goals. It will also involve creating a few design concepts for how some parts of the City could be redeveloped in a more sustainable way, as well as other miscellaneous ideas for green projects.

Goals

The National Park City Foundation has outlined a set of goals for every potential National Park City set forth to achieve. These are found on the Universal Charter for National Park Cities, and are as follows:

"We are working together for better:

- 1. Lives, health, and wellbeing***
- 2. Wildlife, trees, and flowers***
- 3. Places, habits, air, water, sea, and land***
- 4. Time outdoors, culture, art, playing, walking, cycling, and eating***
- 5. Locally grown food and responsible consumption***
- 6. Decisions, sharing, learning, and***
- 7. Relationships with nature and each other,"***
(Charter, 2019).

These goals serve as a great starting point and should be addressed appropriately. However, in committing to becoming a National Park City, San Luis Obispo can be more specific with their goals and make them fit into the City's regional context. This is also an opportunity to more concretely support sustainable goals that the City already has, like being carbon neutral by 2035 and the 10,000 tree initiative. If the push to make San Luis Obispo a National Park City was an actual movement happening in real life, these goals would be developed through extensive public outreach and collaboration with local environmental organizations. Being a hypothetical proposal, the following goals were developed without performing

outreach. Instead of performing outreach I researched the City's current environmental policies and programs, as well as used my own experiences as a resident of the City for four years to develop these goals for the San Luis Obispo National Park City:

Goals

- 1. A carbon neutral San Luis Obispo by 2035.**
- 2. Increased accessibility and connectivity for SLO residents to parks and open space.**
- 3. Residents are stewards of their Central Coast environment.**
- 4. A strong relationship with local wildlife.**
- 5. A vibrant market for locally produced goods.**

We believe that these goals will best serve San Luis Obispo in its regional context, supporting its existing vision for sustainability and creating more opportunities for people and wildlife to thrive on the California's Central Coast.

Conceptual Projects

Part of the way we can begin to imagine San Luis Obispo as a National Park City is by developing ideas that can be formed in to fully developed conceptual projects. Part of what has made London National Park City a success early on is the immediate support it has received from the City in the form of capital improvements and other greening efforts. These projects have lead to some of the tremendous social, economic, and environmental impacts that the City has experienced thus far, and the same would happen in San Luis Obispo.

The SLO Transit Green Line

As previously discussed, one of the things that London has done is implement the Greenground Map, a project designed by Helen Illus. In London, the project uses existing transit systems to show connections between green spaces in the City, and even revealing alternative routes in the hopes of encouraging people to find ways to move about London without their cars (The Greenground Map by Helen Illus, 2019). In San Luis Obispo, an iteration of this project can be implemented in a slightly different way.

The SLO Transit Green Line, as it could be called, would connect dense residential areas of San Luis Obispo with the City's system of parks and open space. This would help eliminate total vehicle miles travelled to and from these spaces and contribute to San Luis Obispo's goal of carbon neutrality, as well as enhancing access to parks for SLO residents who may not have access to a car or other means of transportation.

Depending on the hypothetical funding opportunities created by the San Luis Obispo National Park City, the Green Line would have to be implemented in phases to accomplish all its goals and reach its potential. Phase One of the SLO Transit Green Line would start on a small scale until a higher percentage of the public becomes aware of it and begins to utilize it, providing the line with more funding for subsequent phases via fares and perhaps advertising revenue. SLO Transit could release a monthly schedule that coordinates a roundtrip to one of San Luis Obispo's parks or open spaces every day, originating from the Downtown Transit Center and picking people up along the way. These trips would give participants a chance to experience

parks, open spaces, and other public facilities that they may have never known about, all without needing a personal vehicle to move around. The trips could also serve as social events, where people likeminded about the environment could meet and go on hikes or picnics at the park together. The bus would serve similarly to a carpool, reducing the City's carbon footprint. This first phase could also serve other community events like the Downtown Farmers' Market and the popular summer event, Concerts in the Plaza. Keeping routes to a minimum during Phase One will allow for cheaper operation costs while the Green Line brings in revenue for its future phases.

Phase Two of the SLO Transit Green Line will essentially fulfill the project's initial purpose. The Green Line at this point will transform into a fully operational transit route, connecting residential areas with San Luis Obispo's parks and open space. Stops at these locations will be marked by the nature they are adjacent to, much like the Greenground Map in London, placing an emphasis on the natural environment rather than the built environment. If funding permits, busses will start at the Downtown Transit Center and travel in both directions around the route, enhancing rider convenience and mobility. Two new routes are proposed in Phase Two, with Route A covering the southern and eastern portion of the City, and Route B serving the northern and eastern parts. Route B also includes an alternative route at the southernmost part of its loop. This alternative path can be rotated in with every other bus, providing transit to amenities in the City that are less frequently used but still present nonetheless. Consequentially, this less frequent route may increase the popularity amongst riders of the public

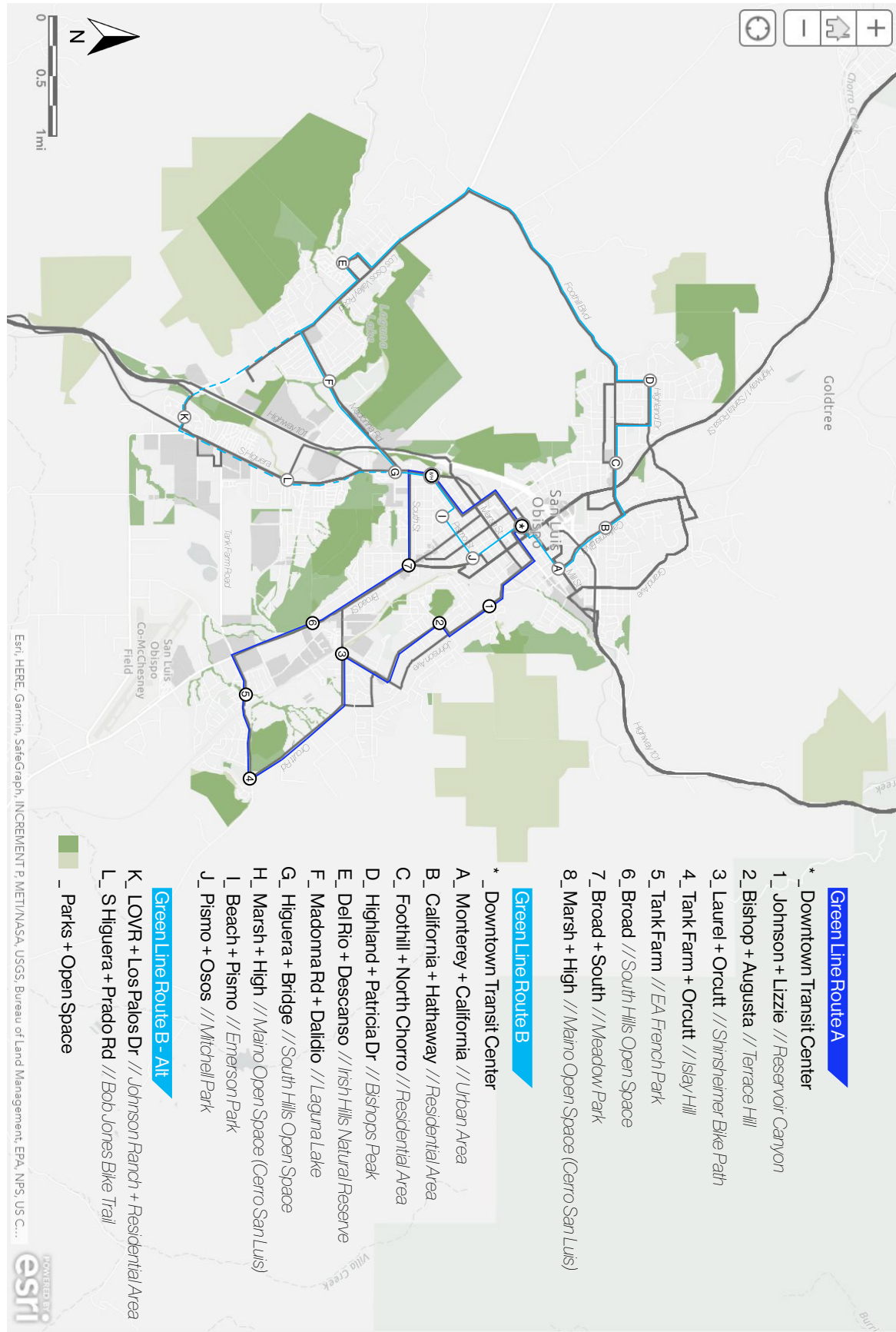
amenities it connects, like the Johnson Ranch Open Space and the Bob Jones Bike Trail. A map of Phase Two can be seen on page 42, illustrating the routes and most important stops.

Phase Three of the Green Line is more of an optional enhancement if the project experiences success and is well received by the community. The Green Line could be the host of a program that sends shuttles to natural attractions outside of the City of San Luis Obispo like Montaña de Oro State Park, Morro Rock, and the Oceano Dunes. This would increase access to the City's surrounding natural environment for residents who do not have access to a personal vehicle. These shuttles could offer one or two roundtrips a day, with additional trips on busier weekends.

The 10,000 Tree Initiative

Another project that could help launch the San Luis Obispo National Park City (SLONPC) movement would be to partner with the City Council and relevant local environmental agencies to accomplish a goal set forth by a "19-page draft Carbon Neutrality Vision" that the council shared with the public at a December 3, 2019 meeting (Wilson, 2019). The goal is to plant 10,000 trees in San Luis Obispo by 2035, to "help sequester carbon" and mitigate the effects of the City's greenhouse gas emissions (Wilson, 2019). As of yet the City has no "specific recommendations for where and how to plant the trees," (Wilson, 2019). Accomplishing this initiative would directly correlate to the City of San Luis Obispo and the SLONPC movement's shared goal of carbon neutrality by 2035. The 10,000 Tree Initiative is just one facet of the Carbon Neutrality Vision, which contains details on other initiatives that

Image 3.3: A map showing the proposed routes connecting green spaces to residential areas.



City officials believe will reduce current pollution “levels by nearly 60%,” (Wilson, 2019).

The plan also “suggests partnering with several local stakeholders, including environmental nonprofits,” to get the project moving (Wilson, 2019). The National Park City Foundation could be included in this group of stakeholders and environmental nonprofits if they had a strong movement in the City.

The natural first step that the NPCF, City of San Luis Obispo, and other environmental nonprofits could take to reach this goal is to research and identify viable options for trees to be planted. This involves researching which soil types and environments best support tree planting and growth, as well as surveying sites in the City that have enough space to bring in new trees.

According to an academic publication by Michigan State University, “loam soils are best for plant growth because sand, silt, and clay together provide desirable characteristics,” that allow roots to easily penetrate deep into the ground and reach water and mineral resources that support growth (Schaetzel). With this in mind, a map has been made highlighting all of the areas in San Luis Obispo with a soil type that is predominantly loam, seen on page 44. This map compares these areas to parks and open spaces within the City, places that most likely have the most space for larger amounts of trees. The initiative as announced by City staff indicates a desire for new trees in these open spaces, as well as within “core city areas,” meaning that a further study will need to be done in the more densely populated parts of the City (Wilson, 2019).

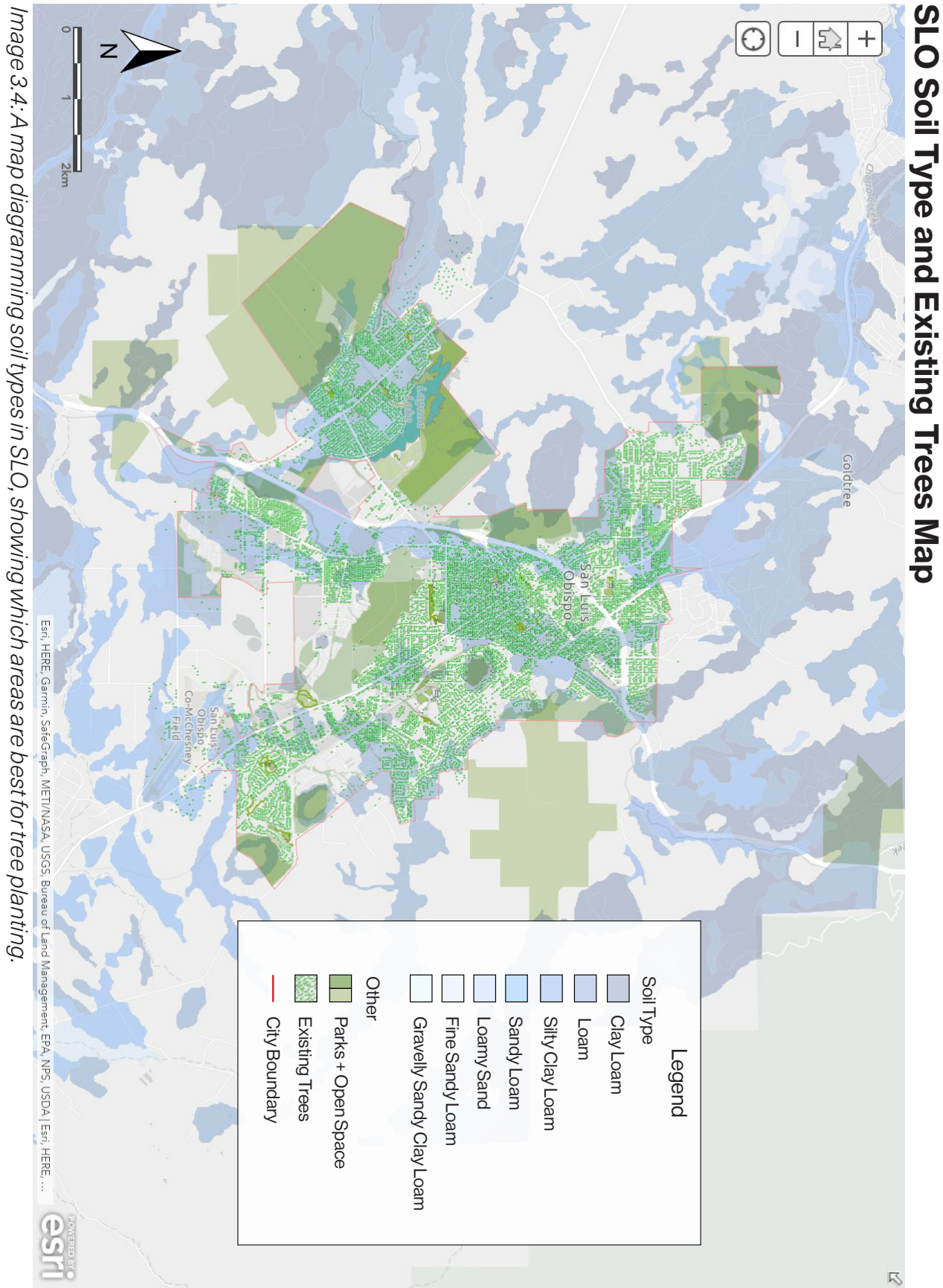
Pairing the Green Line and 10,000 Tree Initiative

Another opportunity exists for the San Luis Obispo National Park City movement to pair these two projects and have them promote each other. Each route of the SLO Transit Green Line could feature its own type of tree to be planted along the streets of its route, providing the line with distinguishing features that emphasize the environmental objectives of the new route, and offering placemaking elements for the communities it travels through.

This would also present an opportunity for the City to devise a plan to work with property owners, giving them incentives to plant trees on their lots and maintain them while the City gets closer to its goal of 10,000 new trees. This would take away some of the cost of this initiative for the City, potentially making the project more feasible.

Additionally, pairing the two projects could also enhance plant biodiversity in the City. According to the California Native Plant Society, there are 32 trees native to San Luis Obispo (Calscape, 2019). Rather than doing one type of tree for each route, the City could elect to plant a different tree type for each neighborhood or main street. Increased biodiversity means a healthier natural environment and wildlife, as well as strengthened resiliency should a natural disaster occur. A map showing the Green Line routes paired with native trees is shown on page 46.

Providing trees along these transit routes also provides a number of sustainable benefits. San Luis Obispo’s current canopy cover, or tree coverage, is only 13% of the City (Wilson, 2019). That percentage is a number that “everyone would agree is very



small,” and hope to increase, according to Cal Poly professor Jenn Yost (Wilson, 2019). Increasing the tree canopy in San Luis Obispo would provide more shade on the streets, which could in turn enable more residents to ride their bike to work or school, further reducing carbon emissions and helping the City get closer to its goal of carbon neutrality. New bike lanes could be implemented where they do not already exist along the Green Line Routes, placing an incredible emphasis on sustainability and healthy lifestyles all together in one place.

The Parkapelago

The next project that the San Luis Obispo National Park City movement could build a platform on is the concept of what urban designers and thinkers at Terraform refer to as the Parkapelago. The Parkapelago is a series of “physical, identifiable, and productive” connections between “parks, grassy campuses, playgrounds, landscaped housing projects, and cemeteries” that “seek to increase the variety and accessibility of these green spaces,” (Terreform, 2016). The original idea for the Parkapelago was developed by urban designers at the Terreform Center for Advanced Urban Research as a concept for Upper Manhattan. Adjusted down to San Luis Obispo’s scale, the Parkapelago concept could still be implemented and effective in making the City a more sustainable place.

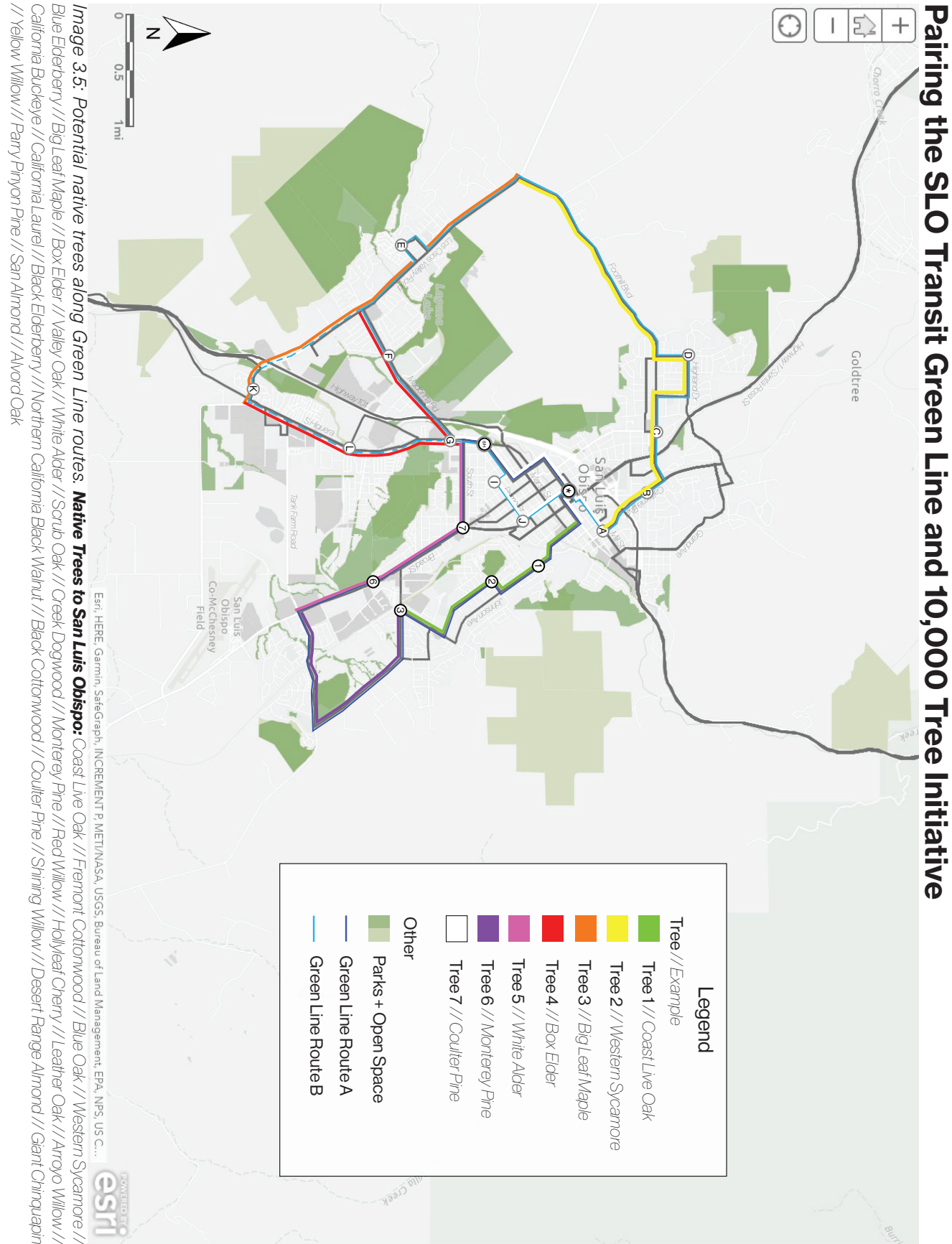
In the Parkapelago a special emphasis is placed on pedestrian and bicycle circulation, creating an “interconnected system” of public spaces that work to diminish the way the natural environment was placed into cities in a “penal relationship that corrals nature into zoo-

like confinements,” (Terreform, 2016). If the concept was fully integrated into a city, a pedestrian could “step outside and walk through green space for uninterrupted miles,” and feel the minimization of “the false distinction between what is ‘built’ and what is ‘natural,’” (Terreform, 2016).

The connections that blend what is built and what is natural are aided by new opportunities for sustainable infrastructure in these green systems. For example, the sustainably minded built environment in Terreform’s Parkapelago includes innovative storm water retention strategies that are integrated into the nature around them, like bioswales, rain gardens, permeable paving, and green roofs (Terreform, 2016). Through fully integrated mitigation elements like these, the Parkapelago is not only a new avenue of connections for people, but for natural resources and wildlife as well. The deeper a city dives into the project, the more openings to blend the built and natural environment there are.

The idea also calls for a high level of public participation and stewardship in order to not only be a “circulatory appliance but a medium of production,” (Terreform, 2016). Researchers at Terreform believe that “transforming isolated sites into a pervasive network” will allow parks and the city as a whole to “increasingly be able to realize its own autonomy,” (Terreform, 2016). In other words, through this expansion of public life by allowing communities to care for their own green spaces, “people will increasingly see the benefits of taking responsibility for the common spaces that provide them with opportunities and quality of life,” (Terreform, 2016).

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The Parkapelo fits perfectly into the narrative of the San Luis Obispo National Park City movement and its sustainable goals for the City. In addition, it blends perfectly with the other project ideas previously discussed in this report. Some of these new connections implemented by the Parkapelo can be made through the proposed SLO Transit Green Line, with the native trees brought about by the 10,000 tree initiative announcing its presence and blending the built and natural environments

within the City. Furthermore, bringing in more opportunities for sustainable travel modes across the City will reduce vehicle miles traveled, and thus carbon emissions released by automobiles, helping San Luis Obispo in its effort to become carbon neutral. The Parkapelo also increases mobility and access to parks and open spaces for residents of the City who may not have access to cars or are unable to drive. Increased access to these pockets of sustainable life and recreation in the City promotes a more equitable use of these spaces, as more residents can reach them without having to depend on driving or by crossing busy and dangerous streets as a pedestrian or bicyclist. This system of connections will also promote stewardship of residents towards their Central Coast environment through the public-private partnership Terreform envisions this idea requiring in order to succeed. Communities will take care of their new green infrastructure that consists of native plants, and “increasingly see the benefits of taking responsibility for the common spaces that provide them with opportunities and quality of life,” as mentioned above (Terreform, 2016). Increased green infrastructure within the City also creates more urban habitat for populations of local wildlife, strengthening biodiversity and the relationships between people and the natural environment. Finally, new green spaces in San Luis Obispo means more opportunities for small community gardens, where residents can learn to grow their own fruits and vegetables and consume them in their own homes. Alternatively, communities could sell or give them away to other residents of the City at the San Luis Obispo Farmers’ Market. The Parkapelo truly addresses and achieves every goal set forth by the San Luis Obispo National Park City movement.

Starting on page 49, the following diagrams will illustrate what the Parkapelago could look like in San Luis Obispo.

The Parkapelago Narrative

The first diagram, Part 1, shows the City how it currently is, with existing bike lanes and bus routes. Part 2 takes the existing City and adds the proposed bike lanes that city staff discussed in a 2015 draft bike plan, as well as the new SLO Transit routes offered by the Green Line. This shows more sustainable connections as the City begins to implement the Parkapelago. Part 3 of the Parkapelago diagram calls out specific areas of the City that could be developed and transformed to promote alternative modes of transportation.

The first Focus Area is Downtown San Luis Obispo. The diagram illustrates new bike lanes and bus stops, as well as potential areas for green roofs and added trees to help reach carbon neutrality and the goal of 10,000 new trees in the City.

Focus Area 2 points out a place in the City where nature is cut off from residents by the 101 Freeway and illustrates possibilities to amend this division through new green pathways and connections.

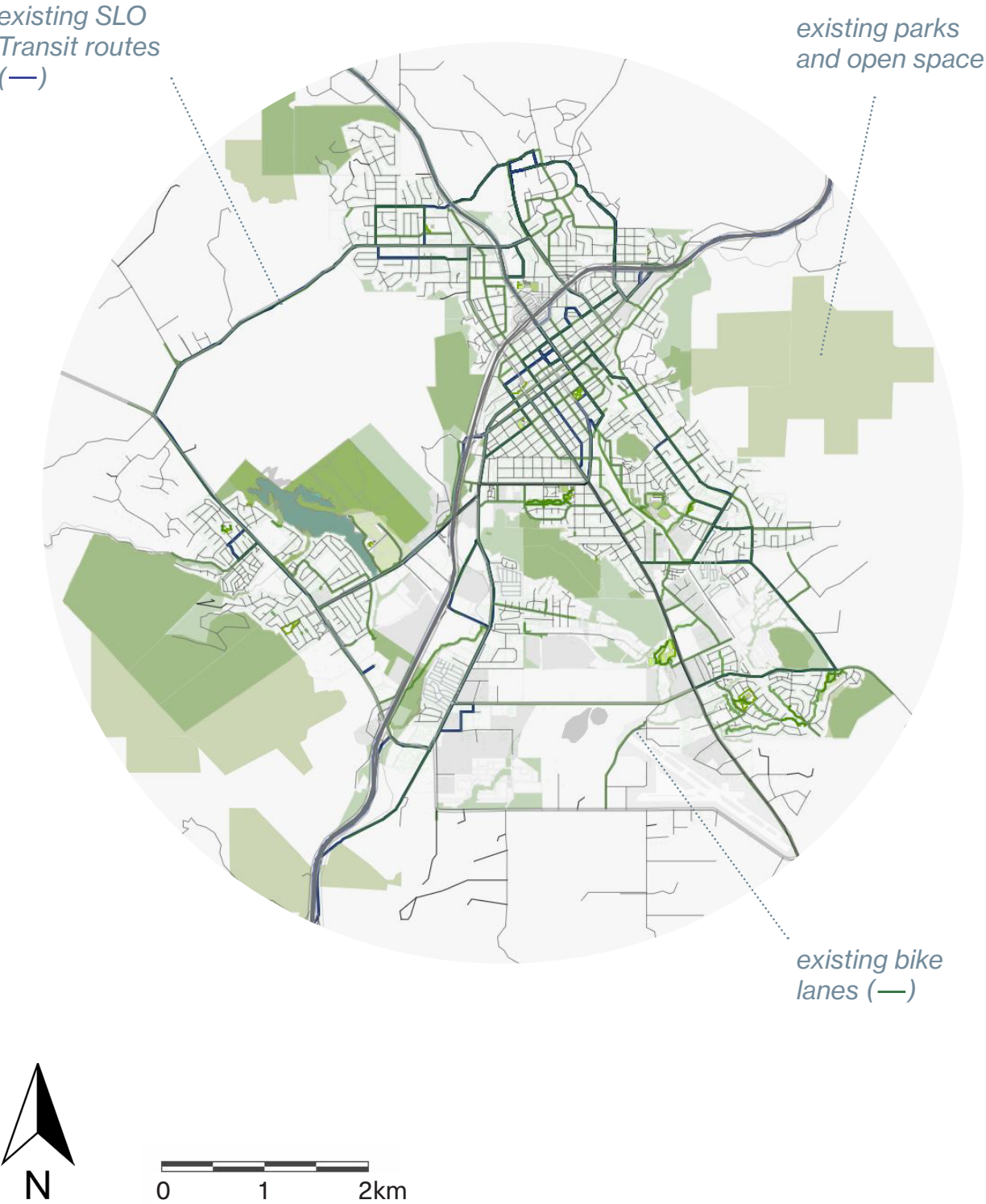
Focus Area 3 addresses a similar issue in a different part of the City. The 101 again cuts off a residential area from open space, and the diagram shows a potential way to address this.

Finally, Focus Area 4 is highlighted to demonstrate where bike infrastructure is currently failing in the City. The bike lane on California Blvd ends abruptly as it approaches the 101, leaving bicyclists vulnerable and in a dangerous position.

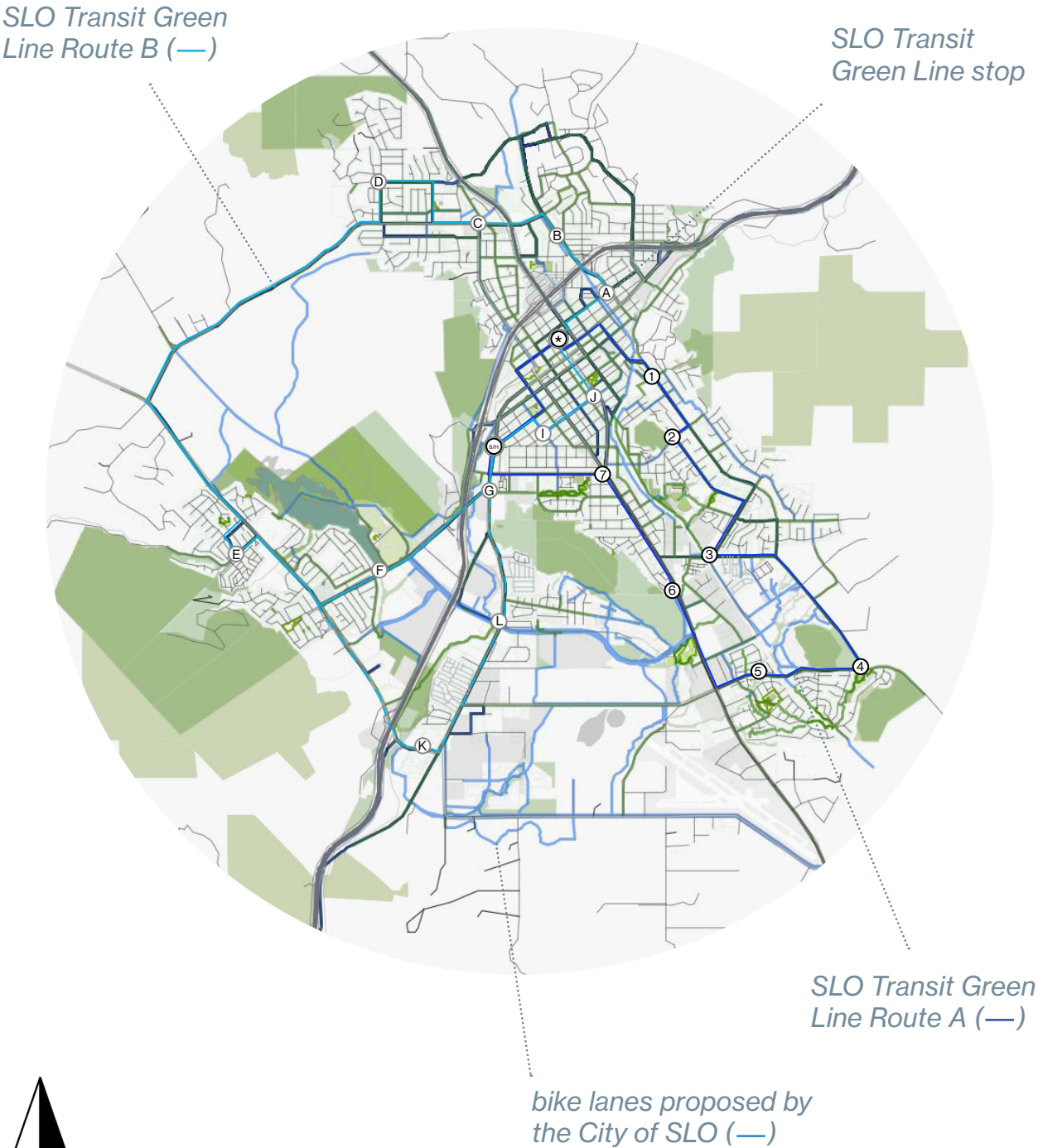
The diagram simply suggests that the bike lane be continued to promote safety and sustainability.

The Parkapelago

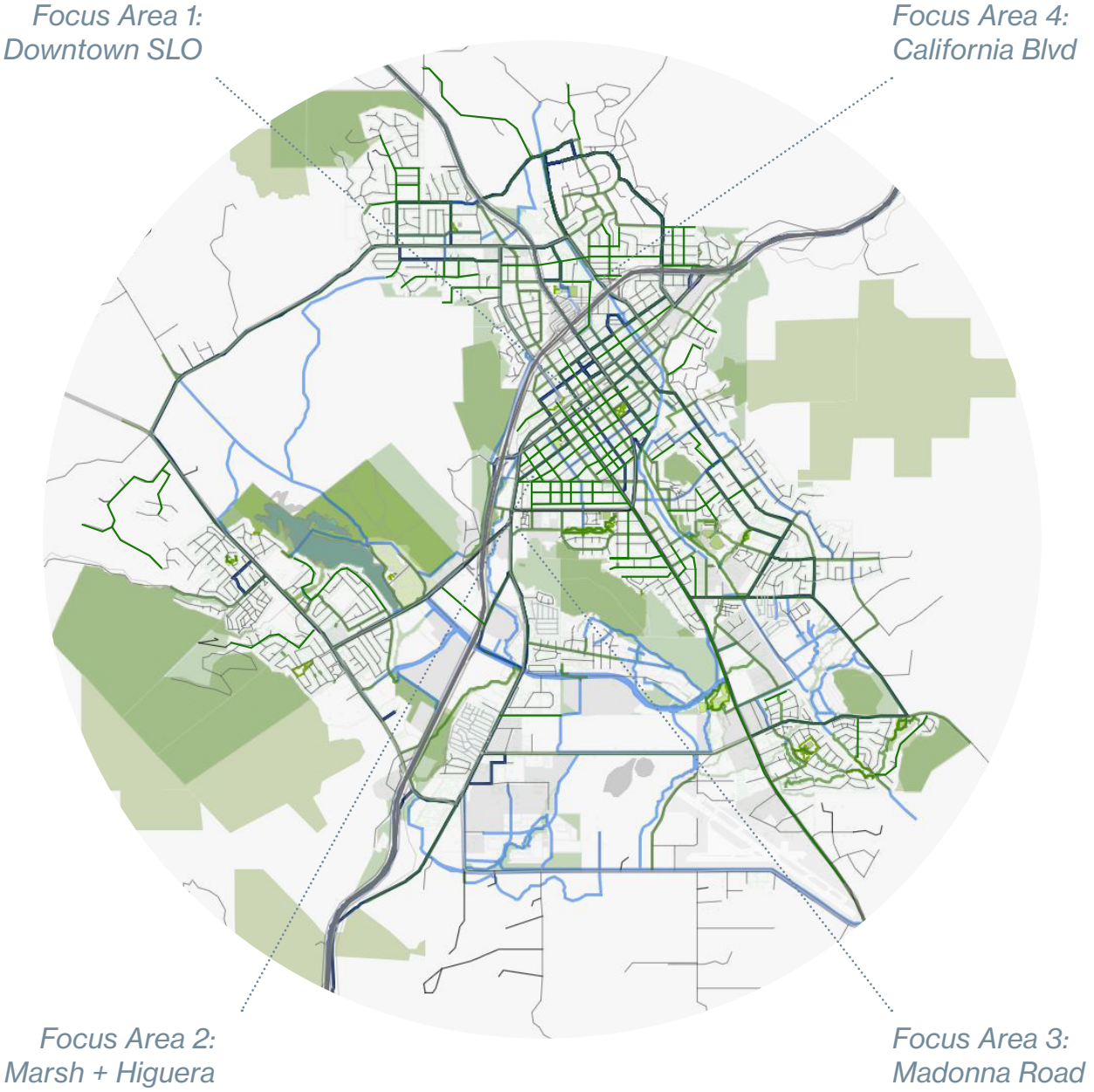
Part 1: The Existing City



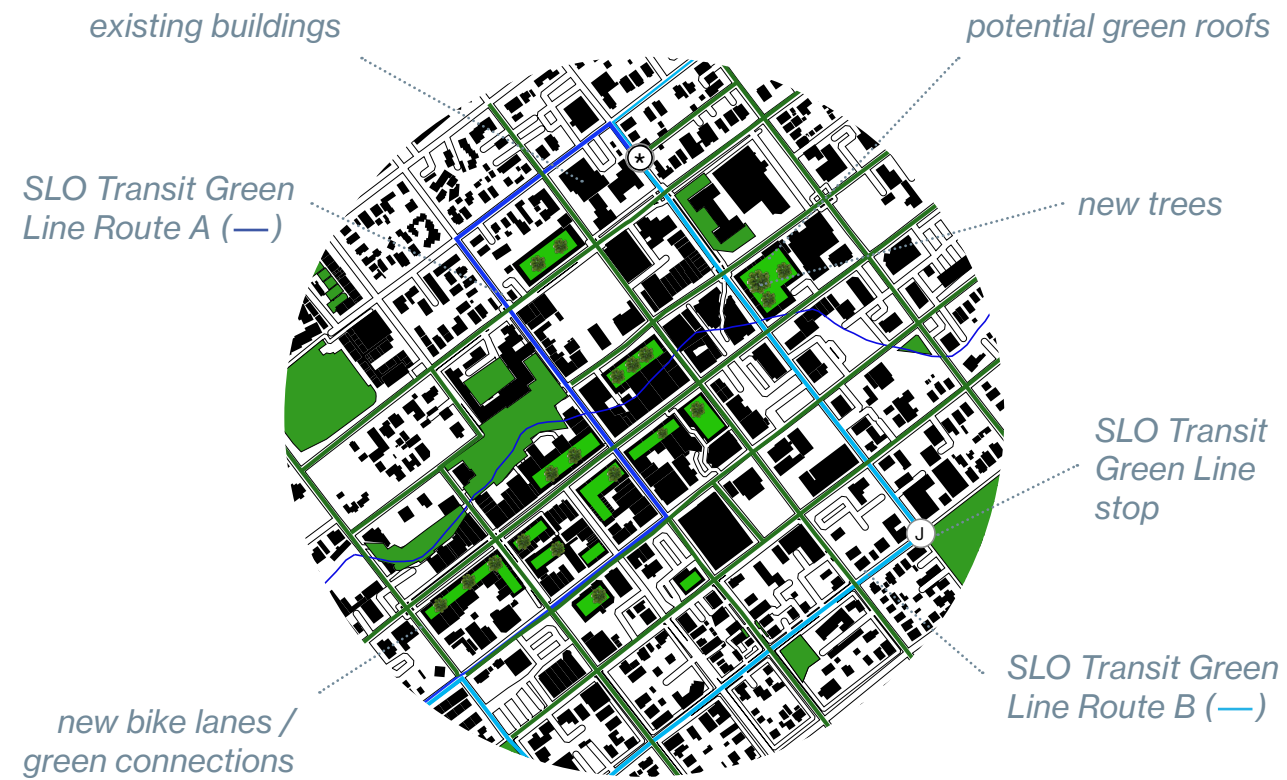
**Part 2: Proposed Bike Lanes
and SLO Transit Green Line**



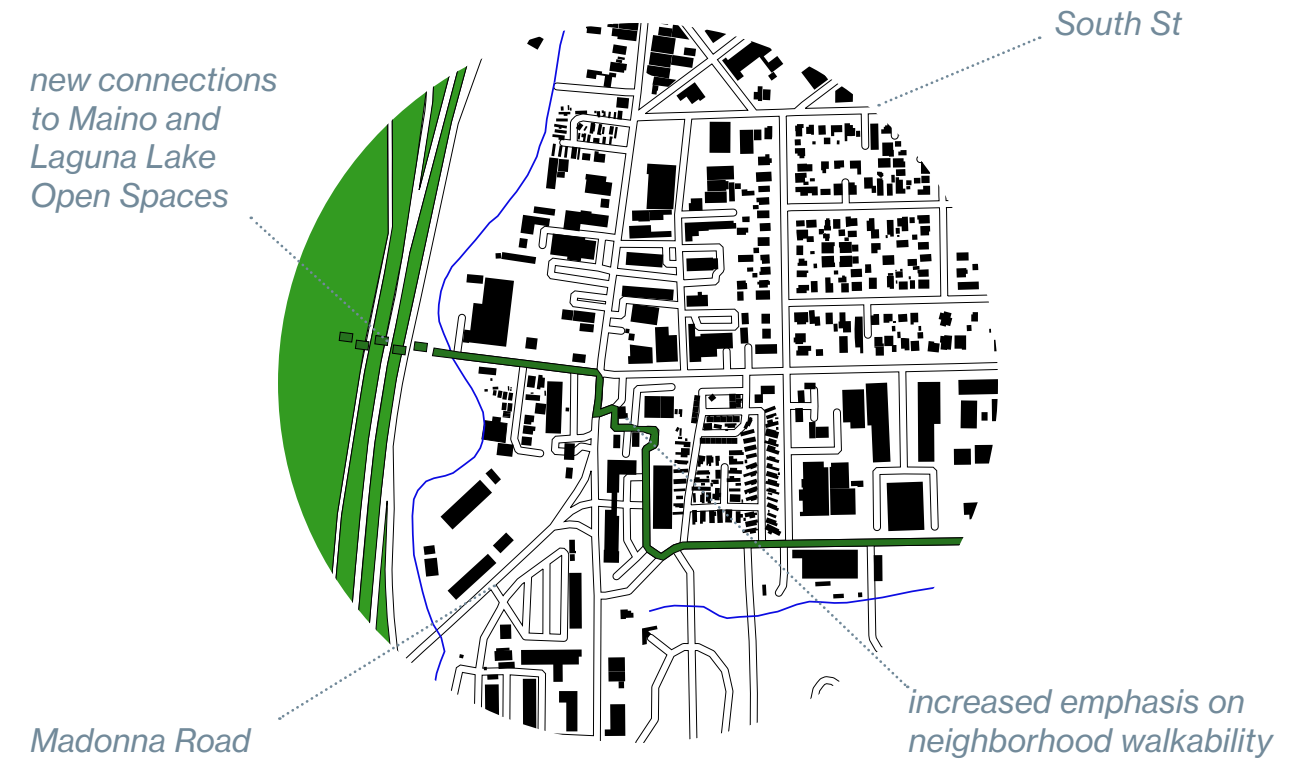
Part 3: New Connections



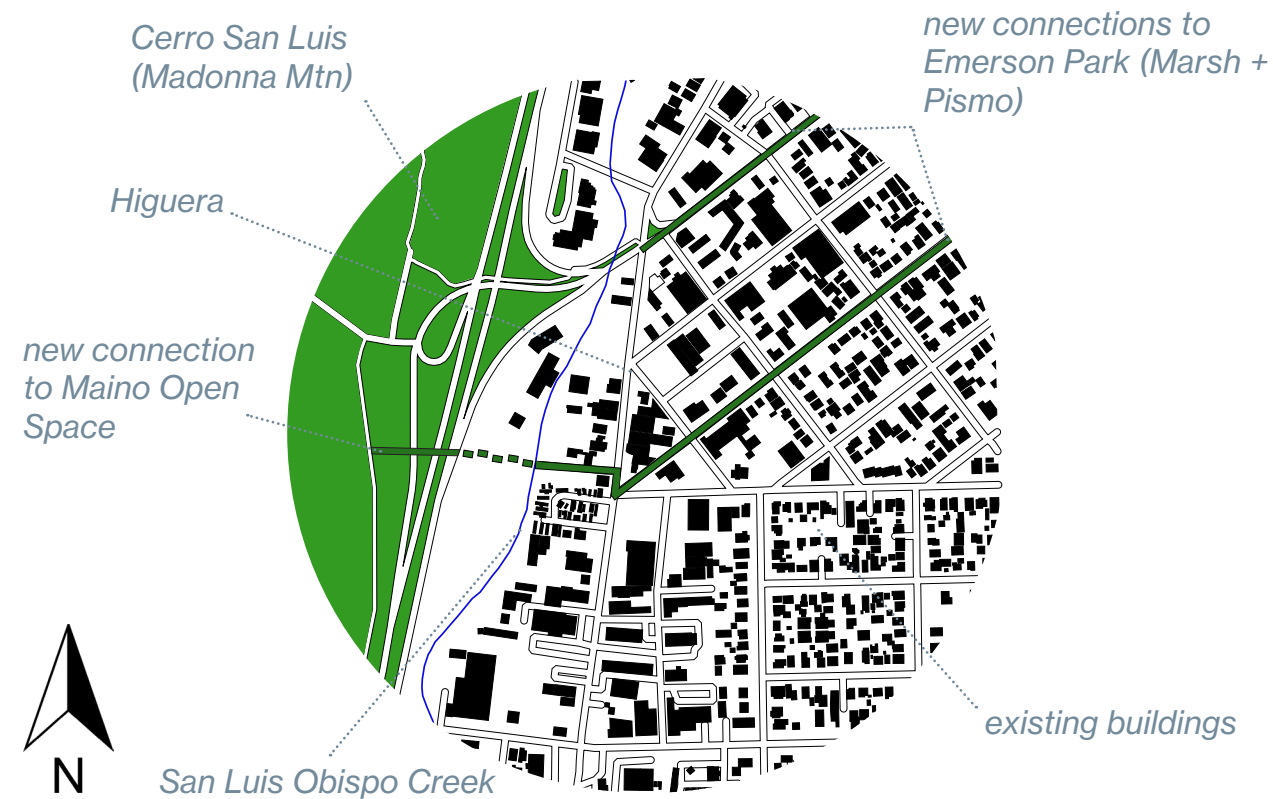
Focus Area 1: Downtown SLO



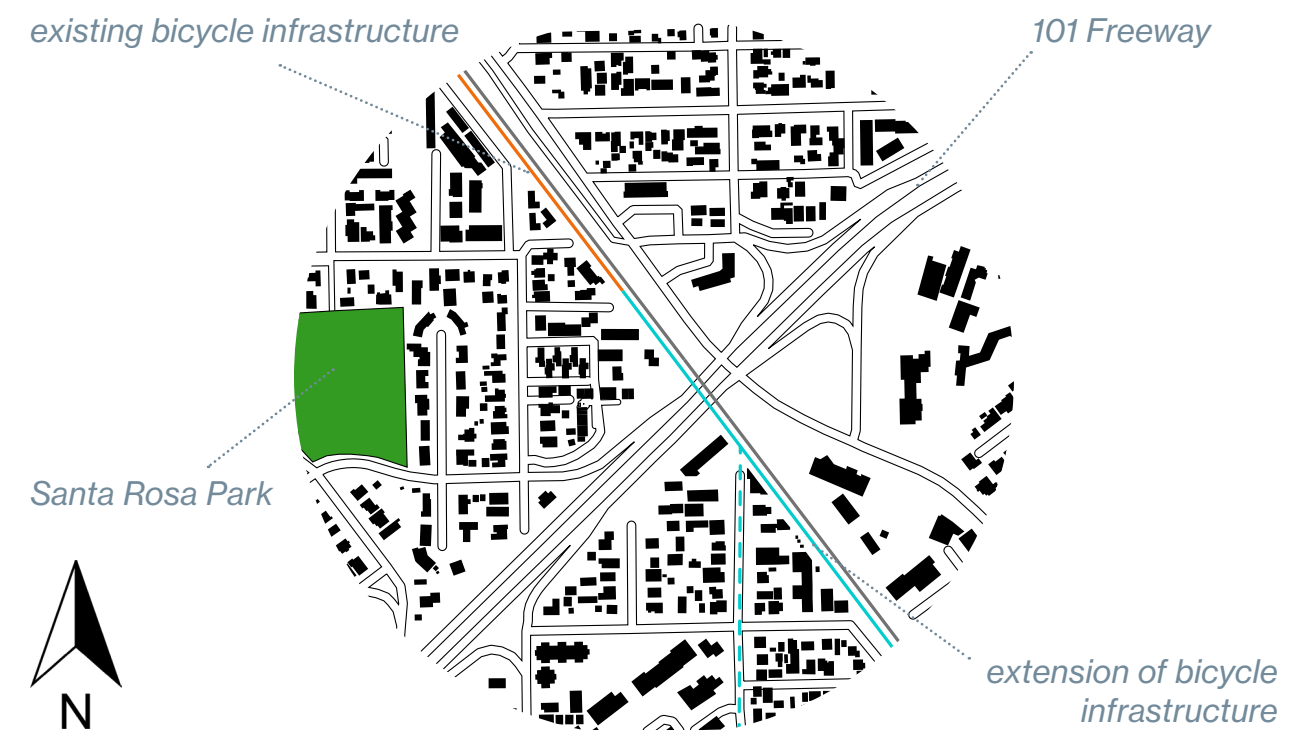
Focus Area 3: Madonna Road



Focus Area 2: Marsh + Higuera



Focus Area 4: California Blvd



Project Perspectives



Image 3.6: A view California Blvd if the City accomplished the 10,000 Tree Initiative along the SLO Transit Green Line, along with the extended bike infrastructure diagramed in Focus Area 4. The blue path indicates Route B of the SLO Transit Green Line.



Image 3.7: Foothill Blvd with added trees and bike lanes to implement the goals and projects of the San Luis Obispo National Park City movement. The blue path indicates Route B of the SLO Transit Green Line.

04

Final Thoughts



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Conclusion

National Park Cities are a revolutionary concept that could change the way we think about our cities and their relationship to the environment forever. More than that, it could change how individuals see their own relationships to nature and the world around them. I mentioned in the Introduction to this report that I think integration plays an important role in moving forward sustainably with nature. Integration requires responsibility at the individual level, and when one reevaluates their relationship to nature thanks to National Park Cities, I hope that they find within themselves a sense of accountability and responsibility to make the idea work, and to make their urban spaces more sustainable and equitable for all. Afterall, cities are made up of the people that live, grow, and work within them, and are made special by what they accomplish together. I think that when it comes down to it, National Park Cities are a great way to start the integration of built and natural, and to spark personal accountability to take care of these new integrated spaces. Just like everything else in planning, the success of the project depends entirely on the people making it work in real life.

National Park Cities here in the United States are admittedly a wild idea. However, I hope that one of the takeaways of this project is that something like this is possible if people out in the world are willing to try. I am aware of the limitations of this study, particularly during these times of sheltering in place and virtual learning without access to some of the resources and programs offered on campus. However, with what I was able to accomplish in my maps and diagrams I believe that I have proven that San Luis Obispo can be elevated to National Park City status with a few years of work and dedication. All it takes is for someone or a group of people to take these concepts and develop them further, to push the limits of what they think a sustainable future can be. Every wild idea is possible if people are willing to see it through.

I hope this report inspires someone to take action towards a sustainable future in some way. Whether it is pushing for the implementation of a National Park City, coming up with a new revolutionary idea of their own, or deciding to continue educating themselves on sustainability, it is essential that each of us act in some way to shape a better future.

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