

Inspiring Change: Global cities leading the way

Future Parks Accelerator – Global Greenspace Leadership Research September 2022





Foreword

Urban green spaces play an important part in everyday life. They provide millions of people with space to relax, connect with nature, exercise, and play. They create a sense of place and if well managed contribute to a places' overall quality of life. Green spaces can also help us fight climate change, help clean the air and provide habitats for wildlife.

Local Authorities are under increasing financial pressure and with no legal obligation to maintain parks, green spaces have fallen down priority lists at a time where demand is greater than ever – during the COVID-19 pandemic millions of Britons were particularly reliant on their local green spaces. Now more than ever, the UK needs inspiring **green space leadership**. In this report, we looked to friends overseas for that inspiration, and we found it in spades.

In this report, we will cover a variety of case studies that showcase the art of the possible when integrated and innovative solutions are applied to establish city-wide urban greenspace. In the examples that follow, we will see how cities deployed multi-level strategies to improve the wellbeing of their residents – such as: ensuring political continuity that results in sustainable greenspace allocation; creating new city-wide policies and programmes for greening; and seeking the active participation and engagement of communities in development of greenspace.

Although the following cities faced different challenges, and therefore implemented unique solutions, there are common themes that we can observe throughout.

Strategic partnerships with local and international stakeholders to maximise a network of support and inspiration;

- Creating multi-functional greenspaces that meet the demands of growing populations, as well as the effects of climate change; and
- Regenerating neglected areas have the highest return on investment at a social, cultural, and environmental level.

Overall, these case studies demonstrate that increasing and maintaining of greenspace, when informed by local stakeholders and broader policies, will have a 'domino effect' that positively impacts all aspects of society and the environment.

Introduction

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Image: "Melbourne CBD with parkland in the foreground" by City of Melbourne



Image: "Paris to turn Champs-Elyees into 'extraordinary garden' after 2024 summer Olympics" - Designboom

What is in this report?

This report presents findings from a mixture of desk research and qualitative interviews with case study stakeholders.

The case studies demonstrate systemic greening and climate change resilience on a city-wide scale, and where possible, focuses on 'how' this was done.

In-depth case studies containing additional insights from in-depth interviews with key individuals involved in the initiatives, are available for Barcelona, Edmonton, Lisbon (and Almada), Melbourne, Paris and St Louis on the Future Parks website.

Note: Cover image - "Rendering of how green Melbourne could look" by Government News

Locations of 12 case studies

Edmonton, Canada

Development of joined up biodiversity, climate change and planning strategies to create a greenspace network that is both ecologically sound and serves community needs all year round.

St. Louis, USA

Great Rivers Greenway (GRG) develops and maintains interconnected greenways across St.Louis that are focussed on providing equitable access to the greenspace and the city.

Paris, France

Green policies at the heart of local politics, meaning greenspace a key focus of all city-wide planning and climate change strategies. This includes reduction of traffic in dedicated parts of the city and a focus on community-based gardening and agriculture.

Vitoria-Gasteiz, Spain

Green border around the city established in 1980s. Current strategy to develop interconnected greenspaces that improve accessibility and increase environmental awareness.

Lisbon & Almada, Portugal

Implementation of local government greening measures to reduce CO2 emissions including green corridors, cycling routes and biodiverse meadows.

Rotterdam, Netherlands

Issues of increasing population and climate change being mitigated against through future-proofing measures, such as better water management, green roofs and improving community-based recreational and public spaces.

Berlin, Germany

The State of Berlin set up a subsidiary known as Grün Berlin, which works with the Senate and the city's boroughs to create green infrastructure and ecologically sound public spaces.

Barcelona, Spain

Development of public-focussed plans that allow for nature and urbanity to work together, such as the Tree Masterplan and increased fully pedestrianised greenspaces and neighbourhoods.

Madrid, Spain

Multi-year programme designed to improve living conditions of key areas of city by tackling social challenges, public spaces, and mobility. This involves improving public spaces and the environmental sustainability of these areas.

Melbourne, Australia

Major drought in the 2000s fast-tracked development of neighbourhood-based climate change resistant tree planting, as well as leveraging funds to pay for increase in city-wide urban forests and urban greenspaces.

San Francisco, USA

San Francisco Parks Alliance (SFPA) advocates for community-based parks, recreation and open spaces. They developed the Community Parter Network, which enlists steward volunteers and the Street Parks Program, a partnership of community-managed spaces on city-owned land.

Medellín, Columbia

Medellín has over 445 projects to create 30 interconnected green corridors. These provide ecological systems and connected recreational greenspaces that are part of a wider suite of nature-based legislation.

Inspiring highlights

Barcelona: A city where nature and urbanity intermingle and enhance one another, while also being resilient to climate change (pg 8)

- Utilising a bottom up approach to mitigating against climate change including adoption of citizen led initiatives.
- The Tree Master Plan focuses on investing in the health and quality of trees throughout the city. It is not about increasing the number of trees but instead increasing the canopy cover.
- Reclaiming space from traffic by reorganising city into Superblocks

Lisbon / Almada: Green corridors consolidate diverse sets of green infrastructure as well as connecting the Lisbon Metropolitan Area (pg 14)

- Replacement of traditional lawns with rain-fed meadows has reduced maintenance, whilst increasing biodiversity and water management.
- Construction of community allotments on previously poorly kept municipal green space has wide ranging benefits for both citizens and nature
- Innovative use of funding streams combines municipal budgets to fund overlapping projects.
- Greening investment in Almada is focused on areas of higher deprivation

City of Paris: "Paris en Commun" strategy is focused on creating a "city of proximities" (pg 10)

- Paris's strategy is rooted in the 15-minute city concept, creating a neighbourhood-centred city whereby residents can cover most of their needs within 15-min by either walking or cycling.
- 300km of new bike lanes and traffic reduction on previously major through roads has made Paris more pedestrian friendly
- With the creative use of public land, Paris has created a network of 150 community gardens, enabling urban agriculture and community gardening

Edmonton: Creating year round multi-functional greenspaces to promote wellbeing and serve the needs of growing neighbourhoods (pg 16)

- Ensuring biodiversity and sustainable green infrastructure strategies were better integrated, so that future projects would answer to a holistic strategy and action plan.
- Implementing a Winter City strategy to create a lively and vibrant city where residents make use of greenspace in all seasons
- Departments involved in ecology and biodiversity, parks and open space were realigned to collaborate on a cohesive strategy.

Melbourne: A joined-up, science led greening approach to mitigate against extreme weather and climate change (pg 12)

Creation of Urban Forest Fund, funded by private developers, to allow for the creation of Urban Forests on public and private land throughout the city

Assessing the appropriateness of tree species for climate resilience and aim to both diversify species and increase canopy cover

Green Laneways programme aims to create cooler microclimates, capture storm water and to combat the urban heat island effect, whilst creating pleasant environments for residents.

St. Louis: A network of urban greenways provide equitable access and connect the urban centre with outlying areas (pg 18)

- St. Louis city, St. Louis County and St. Charles County came together to develop a series of interconnected greenways which stitch together the district, funded by a sales tax levied on all sales in the St. Louis Area.
- The programme has shifted focus to improving greening in dense areas where they can have a bigger impact on increasing city-wide connectivity
- Projects are constantly evaluated to ensure that they remain fit for purpose with changing use by communities

Mini case studies: Inspiring highlights

Berlin Repurposing of unused land and policy-anchored approaches driven by state owned central entity, Grün Berlin (pg 20)

- Unused, previously industrial land excels in providing opportunity for conversion to green space.
- State owned company, Grün Berlin, uses position between government and people to develop considerately of social contexts.
- Citizen consultation is underlined by government guidelines - both central to implementation of upcoming greening projects.

Rotterdam Water management and rooftop initiatives successful and central to resilience planning (pg 26)

- In a city which lies mostly below sea-level, innovative solutions to increasing the city's resilience to flooding have been implemented
- The subsidised conversion of roof space to social and environmental functions has contributed to a 19.5% reduction of storm water overflow, whilst also combatting the effects of urban heat islands
- Neighbourhoods are coming together to maintain these rooftop areas, increasing social cohesiveness.

Medellín Simultaneous approach to greenspace and social issues to create Colombia's 'eco city' (pg 22)

- Creation of 30 green corridors to reduce temperature and connect citizens across the city, prioritising areas that were deficient of green public space
- Participatory budgeting has been central to funding green corridors, and investment into training less advantaged citizens as city gardeners.
- Introduced a legislative requirement that every project undertaken by the city has tangible positive outcomes for citizens, flora, and fauna.

Madrid Social and structural recovery plan incorporates environmental concerns (pg 28)

- Hugely extensive recovery plan, Madrid-RE, prioritises improvements in disadvantaged communities focusing on social challenges, public spaces, and mobility
- Story Maps allow citizens to track the changes taking place as well as allowing for transparent communication and encouraging the use of new developments.
- Four urban networks have been identified, proximity, environmental, identity and mobility, which must function correctly together in order for each individual district to function

Vitoria-Gasteiz City's greenbelt initiative to regenerate degraded space and provide extensive greenspace (pg 24)

- The city created an environmental studies centre with specialised departments in awareness, information innovation, and analysis.
- An uninterrupted green loop now surrounds the city connecting existing areas of urban greenspace to degraded land with the intention of increasing availability and accessibility.
- Green infrastructure projects are considered at a district level, and include numerous pilots with the aim of rolling them out to the rest of the city

San Francisco Grass roots empowerment of local communities and leaders to create effective local greenspace (pg 30)

- Philanthropic organisation, San Francisco Parks Alliance, provides resources and funding to those turning unused land into greenspace.
- The Community Partner Network brings together passionate and knowledgeable stewards who seek to create stronger communities by creating green spaces
- The Street Parks Program enables the creation and maintenance of community managed spaces on cityowned land. More than 100 have been created since 2004.

1. Case studies

Barcelona, Spain

A public-empowered 'Climate Plan' that influences all green infrastructure initiatives

Released in April 2018, Barcelona's Climate Plan 2018 - 2030 was an ambitious, Paris Agreementcompatible plan. It encompassed Barcelona's strategy to reduce emissions by 45% on route to becoming carbon neutral by 2050. It was co-developed with residents and integrated mitigation, adaptation, climate justice and citizen action policies.

It utilises an ecosystem-based approach that joins up greening and resilience initiatives that are aimed at positively affecting citizens whilst mitigating the effects of climate change using green infrastructure strategies.

A plan to ensure nature and urbanity enhance each other

The Barcelona Green Infrastructure and Biodiversity Plan 2020 sets out that Barcelona in 2050 will be a city where nature and urbanity intermingle and enhance one another. It is an action plan that envisages a model of an urban Image: City vision for 2050 - Barcelona Green Infrastructure and Biodiversity Plan 2020



Barcelona in 2050 may look something like this

green network which involves green corridors and recognition and modification of opportunity areas, such as roofs and balconies to unoccupied plots.

A twenty year plan for trees

Barcelona is focussed on planting and managing trees across the city through the current "Trees for living: Barcelona Tree Master Plan 2017-37". The Plan aims to create a well-managed, healthy and biodiverse woodland that will interconnect the urban and natural environment whilst also being resilient to climate change and in turn enabling residents to adapt to the changing climate.

- Co-production strategies were key to the collaboration between the council, public and private organisations and citizens as part of this project; and
- These biodiversity and tree canopy goals were then legally enshrined so they would be integrated into all spatial planning projects.

Reducing city areas dedicated to traffic

The intention of the Superblocks (Superilles) programme is to reorganise the layout of Barcelona, by redistributing the mobility structure of streets so that those dedicated to traffic are limited. Streets previously used by traffic can be used for other functions such as recreation and relaxation, as well as providing additional opportunities for developing green space.

- Undertaken through gradual interventions, such as changing road signs and redesigning the bus network;
- Traffic becomes restricted to outer perimeters of superblocks. This may have an impact of traffic levels elsewhere in the city; and
- Nine superblocks are initially being implemented, with the development of new green spaces within them. The intention is for the entire city to eventually be made up of superblocks, vehicles being limited to the outskirts of each.



Image: the strategic lines of the Barcelona Tree Master Plan (p15)



Image: an example of a Superblock - Ajuntament de Barcelona (p10)

City of Paris, France

Renewing the city's urban plan through green policies and increasing greenspaces

The City of Paris' greening and climate change adaptation strategies are driven by political policy and are rooted in the 15-minute city concept, as part of the 'Paris En Commun' strategy. Sustainability, food production and housing are key concerns, meaning that they influence all aspects of greening policy and strategies.

Greening strategies include the PLU Bioclimatique initiative, and increasing resident involvement in urban agriculture and community gardening. The financing of such projects is done through funds from the City of Paris, as well as the climate bonds that were set up after Paris COP21 in 2015.

Changing the rules on climate-sensitive construction

Since December 2000, local urban development plans (plan local d'urbanisme - PLU) have been part of the legal process for urban development and land use in Paris. The PLU is currently being reviewed to better equip the City of Paris in its response to climate change, meaning different rules of construction and reorganisation of the territory in a manner that is sustainable and resilient whilst preserving Paris' heritage and landscapes.

- The objectives of the new PLU are holistic in approach in considering how a new construction may impact upon the block or district in which it is situated, including its relationship with public space;
- It's an iterative process with the legalities being regularly reassessed at key intervals;
- It reinforces current public spaces as being creators of resources by turning them into green spaces.



Image: "The 15 minute city, Paris" ArchDaily



PLU Bioclimatique: key planning thresholds

Urban agriculture and community gardening

Having developed participatory approaches, Paris has a network of 150 community gardens that are managed by neighbourhood associations.

- The green permit programme (permis de végétaliser) was created in 2015, which authorised residents, associations and businesses to garden directly onto public space, such as the spaces at the base of trees, along curb sides and next to buildings.
- The City of Paris has also set up the "Parisculteurs" programme (the Paris Urban Farmers programme). This programme allocates funds from the Municipality of Paris to assist in getting project proposals aimed at implementing urban farming activities off the ground. The City of Paris utilises its contacts to allot plots of land on open space, on roofs of buildings or even in basements to be used by urban farming projects that have received funding.



Image: Plantation Pit Rue Coulmiers – Jean Pierre Viguie (paris.fr)



Image: Pop-Up garden on Parisian street – popupcity. net



Image: Agripolis on the Delacroix Middle School roof - pariculteurs.paris



Image: Rue de Chevaleret -Victor Connan (paris.fr)

City of Melbourne, Australia

Planning to mitigate against weather extremes

Since Melbourne suffered from a major drought from 2000 - 2009, which had a substantial impact on their parks, gardens, trees and other vegetation. Within the city there have been efforts to put in place strategies that adapt and mitigate the effects of further extreme weather events caused by climate change.

Within these strategies there have been actions and initiatives put into place to increase trees and vegetation with the aim of providing cost effective and efficient ways to cool the city of Melbourne in summer and help mitigate issues of storm water in winter.

Creating 'urban forests'

Awareness of struggling tree species was built into the last ten years of strategic outcomes as part of the City of Melbourne's greening strategies generally and as part of the Urban Forest Strategy.

• As part of this, the Urban Forest and Ecology Department has been planting around 3,000 trees a year, new cohorts of trees have been established at key sites in Melbourne's parks and neighbourhoods;

- In order to begin implementing the City of Melbourne's Urban Forest Strategy, 10 Urban Forest Precinct Plans were developed to explore how the objectives and targets of the strategy could be achieved at a local and community level; and
- The resulting plans are performance based and form part of an iterative process to

establish desired outcomes for the streets within the precincts without being too prescriptive with regard to species type for each location.



Image: "Melbourne's Urban Forest Strategy" - City of Melbourne

Leveraging funding to pay for urban forests

The City of Melbourne only manages around a third of the total land within the Municipality, as the rest is privately owned. The City of Melbourne was therefore looking at ways to achieve greening on private property in a strategic way.

- The Urban Forest Fund enables private businesses and residents to apply for funding for greening projects, which will then be assessed and waited by the council. Accepted projects are then match funded;
- Funding is mainly generated through the tree removal reserve, whereby any trees removed through construction will be paid for by the developer;
- The council contributes towards project management and design fees, as well as the project itself;
- The Forest Urban Fund is now mainly geared towards smaller private realm projects; however, during the first round of funding the council also offered the grants to larger private developers; and
- The council are now attempting to develop stronger sustainability mandates to feed into the planning process.

Creating cooler microclimates across the city

The Green Laneways programme was delivered out of the Department of Parks and City Greening and was implemented about four years ago. The intention behind it was similar to the Urban Forest Strategy, to create cooler micro-climates, capture storm water and to combat the urban heat island effect, whilst creating pleasant environments for residents.

- The scheme involved the development of an interactive map that showed laneways that were predisposed to going green;
- Four laneways were selected based on 800 public nominations and expert advice from a panel of engineers, sustainability professionals, placemakers and landscape architects;
- During the Greening Laneways programme, private property owners were able to offer to have vertical gardens and/or climbers on their walls or the council did match funding with property owners; and
- This is how the Urban Forest Fund started to develop, as some match funding was also utilised during the Green your Laneways initiative.



Image: "Rooftop garden in Melbourne" - City of Melbourne



Image: "Meyers Place, Melbourne" - City of Melbourne

Lisbon, Portugal

A case study in public buy-in

Over the past few decades Lisbon has been implementing a suite of greening measures and strategies to cut CO2 emissions in order to mitigate against and increase resilience in the face of climate change.

Greening measures have included the development of green corridors, a network of cycling routes and biodiverse meadows that are managed by the introduction of grazing sheep to Lisbon's parks.

Between 2002 and 2014, Lisbon managed to achieve cutting its CO2 emissions by half through its climate change and greening initiatives.

Creating new green corridors

The Green Corridors network was initially consolidated by plotting out remnant areas of natural habitat, as part of the Lisbon Master Plan. The proposed area for the green corridors was defined as a means to connect the Lisbon Metropolitan Area, where possible.

- This strategy was strengthened by the fact that much of the land was still within the municipality's property holdings;
- The total value of the green corridors project was estimated to be €65 million. This sum takes into account Lisbon's green parks, pedestrian and bike connections, including bridges on the green corridors (excluding riverside renovations); and
- Funding was used innovatively by combining different municipal budgets to fund different projects, for example, the bicycle initiative was at times used to fund the green corridors as cycling lanes were implemented as part of the greening process.

Biodiversity meadows

The Municipality began to implement the biodiversity meadows in 2012 under a strategy developed in collaboration with Lisbon University.

 The biodiversity meadows were firstly implemented as part of the green corridors project; however, this strategy has now been expanded by the City of Lisbon to replace traditional lawns with rain-fed meadows wherever possible;

- The meadows provide drought resilient plant cover, that requires no irrigation and little maintenance, thus in turn reducing costs for the council that can be utilised elsewhere; and
- The meadows were also maintained through the introduction of sheep. Sheep feed on ideally biodiverse pasture; they are a natural means of keeping the meadows under control.



Image: The Green Corridors of Lisbon - Oppla

However, the implementation of these measures received mixed reactions from the general public and opposition politicians. A key finding from this case study is that proactive community engagement with projects that get a cross section of society involved and on board is key.

Community gardens and allotments

As previously discussed, Lisbon's municipality Green Plan 2010 aimed to link most green space in the city through ecological corridors. In response to this, the Urban Garden Strategy from 2011 initiated the construction of allotments throughout the city.

- This strategy was particularly aimed at tackling areas of poorly maintained municipal green areas. It also involved the removal of illegal gardens and agriculture on unmaintained land;
- The allotment parks are owned by the City of Lisbon and are supervised by the municipality with rent being collected to help fund the initiative, as well as receiving funds from participatory funding streams;
- The plot sizes vary depending on function with some lower income families receiving concessions to reduce costs; and

 The City advocates organic gardening practices for allotments. Community gardens and allotments tend to be managed by volunteers, who are expected to adopt organic procedures, as well as offer learning around sustainable gardening.



Image: "Biodiverse meadow and sheep" - LIFE LUNGS



Image: LNEC Campus - urbanallotments.eu/casestudies/portugal.html



Image: Horta da Lada - urbanallotments.eu/casestudies/portugal.html

Edmonton, Canada

Multifunctional spaces for the wellbeing of people and planet

Since the mid-2000s Edmonton has been developing strategy and biodiversity projects that serve the needs of nature conservation and the social and recreational requirements of residents. These strategies reflect the evolving priorities and needs of Edmonton through increased recognition of the potential impacts of climate change on the city, as well as developing multifunctional spaces that speak to the social needs of residents in terms of wellbeing and health and celebrating cultural connections to the surrounding landscape.

An outcome-based ecological network

Natural Connections was Edmonton's first integrated conservation plan for protecting, managing and restoring local natural areas and biodiversity, as well as engaging the community in this. The plan utilised an outcome-based, ecological network approach to conserving the city's green space and the surrounding landscape.

There are three parts to Natural Connections - a Natural Areas Conservation plan (2005), a Strategic Plan (2007) and a Biodiversity Action Plan 2009) which are all still functioning as part of the city's biodiversity strategy.

Planning for multifunctional spaces

Breathe is the green network strategy that has mainly superseded Natural Connections. Instead of focussing purely on the ecological side, the strategy approaches open space as being multifunctional.

- Breathe is an iterative 30 year long strategy aimed at guiding the planning of the city's green network in a manner that meets the needs of growing neighbourhoods.
- Breathe has three over-arching themes aimed at framing how Edmonton green spaces should be conceived. These are: Ecology; Wellness; and Celebration.
- The Breathe strategy adopted a co-production approach.



Edmontori offers an integrated, multifunctional network of parks and open spaces that is renowned as an iconic and defining feature of Alberta's capital city

The green network supports healthy ecosystems and diverse wildlife habitats, and meets the needs of communities present and future by connecting people with year-round opportunities to learn, commute, recharge, recreate, gather and celebrate.

Edmontonians are proud of their green network and enjoy sharing the diverse environmental, economic and quality-oflife benefits the green network provides.

Image: A Vision for Edmonton's Green Network – Breathe Strategic Plan (2017)

Modernising green and blue space

The River Valley area is a key piece of greenspace that runs diagonally through Edmonton that is key to the mitigation and adaptation to future effects of climate change.

As part of the Breathe strategy, in 2021, the City of Edmonton initiated a process of modernizing River Valley planning by updating the 1992 Ribbon of Green planning document and the 1985 River Valley Bylaw.

- This renewal of the planning document and connected bylaws and projects was an attempt to ensure that Edmonton's biodiversity and sustainable green infrastructure strategies were better integrated into cross-departmental planning and projects.
- The Ribbon of Green provides the strategic direction for the River Valley modernization. It presents the overall vision for the River Valley in terms of what greenspace the City of Edmonton intends to protect and provide recreational access to.
- The River Valley Area Redevelopment Plan, is the regulatory framework for the proposed River Valley modernization. It sets out who makes the

decisions, the rules that guide decision making and the process by which decisions are made.

Creating a 'Winter' strategy

To ensure that Edmonton's open spaces are used by residents throughout the year, the City of Edmonton developed the Winter City Strategy. The aim of the strategy was to minimise the more negative impacts of winter and create a lively and vibrant city all year round whereby residents made use of its greenspace in all seasons.

- The strategy was based around a multi-faceted consultation where residents were asked what would make a difference to how they perceived and experienced winter in Edmonton. This was to understand how to encourage people to embrace using greenspaces during winter.
- Like the other strategies outlined in this case study, the 10 year long Winter City strategy applies a holistic approach by attempting to impact on residents lives through recreation, urban design and wellbeing.



Image: "Edmonton, Canada skyline with buildings" - wallpaperflare



Image: "Four people enjoying the winter sun" - WinterCity strategy

St. Louis, USA

A public mandate for 'greenways' and 'watercourses'

In November 2000, 68% of voters in St. Louis City, St. Louis County and St. Charles County, Missouri, approved Proposition C, the Clean Water, Safe Parks and Community Trails Initiative. The vote created the Metropolitan Park and Recreation District, now known as the Great Rivers Greenway (GRG), as well as a sales tax to fund greenway initiatives.

- Funding for GRG is generated by any purchases made in the St. Louis region. GRG receives 50% of 1/10th of a cent (i.e. 0.0005 cents) in St. Louis City, St. Louis County and St. Charles. In St Louis City and County (STL) this is upped to 1 cent per \$10.
- Shortly after the additional sales tax was passed, GRG created a foundation, which is a non-profit organisation that further supports the public money that GRG levies through the generation of philanthropic donations.

Building the River Ring: A Citizen-Driven Regional Plan

GRG adopted their first strategy - 'Building the River Ring: A Citizen-Driven Regional Plan' in 2004, which focused on implementing and responding to the open space needs and concerns of GRG district residents.

• The St. Louis region is surrounded by waterways, which is why the greenspaces strategy revolved around the concept of a River Ring.



Image: The river ring - the foundation for the regional, interconnected system - Building the River Ring (2004)

- The plan was focussed on three key outcomes for successfully developing an interconnected system of greenspace, which were economic development, social capital and environmental stewardship.
- Citizen co-production methods included development of Citizen Advisory Committee, focus groups, initiation of Technical Advisory Committee and community forums.

New plans focus on equitable access to green space for more equitable wellbeing

In 2011, GRG published a Regional Plan Update that expanded upon the original Building the River Ring framework. The purpose of the Plan Update was to incorporate additional aspects into the framework for building the River Ring.

- Additional aspects revolved around refining ideas around evaluation, priorities, partners and communication.
- The Regional Plan Update recognised that GRG needed to play an increased role in promoting and sustaining the River Ring now that the organisation and the implementation of the

greenways had been going for a decade.

• Like the original strategy document published in 2003, the planning process of the Regional Planning Update involved input from various community engagement teams and focus groups.

The most recent regional plan update was published in 2016, it reiterates the visions set out in the strategies in both 2003 and 2011; however, it is focussed more on putting these goals into action and a commitment to the long-term equitable wellbeing of the St. Louis region. The update sets out achievable action plans focussed on:

- Building the River Ring
- Promoting the River Ring
- Sustaining the River Ring

Focusing on dense areas to increase city-wide connectivity

More recently, GRG have been deviating away from their original core strategy of developing greenways around watercourses and are focussing their attention on more dense areas that allow residents greater connectivity to other parts of the city of St. Louis. This is to ensure that current and future greenways achieve their maximum potential and impact in providing equitable greenspace that connects neighbourhoods with wider social infrastructure.

- GRG utilises data to improve existing greenways through installation of amenities, as well as developing public and private partnerships that enable greenways to run through and connect to privately owned land, parks, public transport routes and infrastructure.
- An example of an ongoing urban greenway project that GRG is undertaking is the Brickline Greenway. The aim of the Brickline Greenway is to create a web of greenways in the centre of the city that would then run to the north, south, east and west of St. Louis to connect neighbourhoods with greenspaces and urban hubs and infrastructure.





Image: "Renderings of Brickline Greenway" - Great Rivers Greenway

Berlin, Germany

Greening and green urban development

Berlin has a rich history of reinvention – whether by necessity or for future resilience. Their sustainability strategy operates at an infrastructural level and so it influences various aspects of city living, from creating networks of walking, cycling and public transport to adhering to a set of criteria for more socially and ecologically responsible conventions

The city has repurposed urban areas such as the decommissioned Tempelhof Airport in 2008 – now a 250-hectare green space, or the planned 750-metre-long swimming pool in the unused Spree channel.

Citizens have set up communal gardens and allotments that become meeting spaces for neighbours and visitors alike – such as Himmelbeet and the urban gardening manifesto. Further, Berlin is home to Europe's largest aquaponic farm, as well as large-scale indoor and urban farming that supply food to grocery stores, hotels, and restaurants.

These efforts are anchored to Berlin's Energy Turnaround Act, which provides a statutory framework for Berlin's goal of being climateneutral by 2050. Contributing to these efforts is Grün Berlin GmbH – a state-owned company that aims to develop sustainable urban development by designing places that meet the needs of its inhabitants and by developing transport solutions that are not car-dependent.

Translating political decisions into tangible projects

Grün Berlin's sole shareholder and parent company is the State of Berlin. As such the company works closely with the Senate and the city's boroughs to create sustainable infrastructure that is climate friendly as well as considerate of the city's various social and cultural contexts.

- The company's financing is largely provided by grants from the state, as well as its own income, and it follows the technical policy set by the Senate Department for the Environment, Transport and Climate Protection.
- To this end, they categorise their projects into three main themes: creating and operating infrastructures with an ecological and social function; developing and building attractive public spaces; and developing barrier-free, safe transport infrastructure.

An example of this multi-faceted approach is the Natur Park Südgelände (Grün Berlin GmbH, 2022a) – a former industrial wasteland that was transformed into a nature park that combines art, heritage, and ecological preservation.

- Grün Berlin worked with artists and landscape artists to revitalise this area, following its designation as a landscape conservation area and nature reserve.
- In 2022, the the Natur Park Südgelände was awarded the International Carlo Scarpa Prize ("Natur Park Schöneberger Südgelände and Berlin's Urban Nature," 2022) in recognition of its unique blend between historical and design values, as well as social and ecological values.



Image: Art in the Park - natur-park-suedgelaende.de/

Transformation driven by public engagement

Two upcoming projects led by Grün Berlin have public engagement and participation at their core: Spreepark and Platz der Luftbrücke. Both projects are based on the Berlin Guidelines for Citizen Participation in Urban Development which outlines the importance of involving citizens early in the planning process and empowering diverse groups through decision-making and transparent communication processes.

- At Spreepark, citizens were involved in all planning stages and their responses were compiled in the "Spreepark Course Book" – which served as a guideline for construction and operation of the park.
- The Platz der Luftbrücke, on the other hand, aims to be a model for sustainable development of transportation and therefore to promote environmentally friendly mobility.
- This project is currently in development and one of the top references for the Charta für das Berliner Stadtgrün (Charter for a Green Berlin City).



Image: "Schieneweg" by Silke Klimesch

Medellín, Colombia

Utilising local and global resources to re-naturalise the city

Medellín sits in the middle of the Andean mountains, whose surrounding hills serve multiple purposes. These hills, however, are also home to the poorest communities of Medellín - who often have lack of resources and of easy access to the city. As the second largest city in Colombia, Medellín's political leaders sought to take on deep-rooted problems and pressing issues from climate change

Medellín has implemented several initiatives, including Sistema de Árbol Urbano (an online library where trees are classified and recorded as natural heritage of the city); increasing protected natural reserves in the city (2,738.5 hectares); and creating 30 Corredores Verdes (Green Corridors) throughout the city.

Reducing average city temperature

The "Corredores Verdes" combined over 445 projects that created 30 'corredores' to bring life to new ecological systems and improve citizens' lifestyle. This is an investment of over \$45 billion Colombian pesos (9 billion GBP) that aims to reduce city temperatures and to connect citizens from all areas of the city (starting with the hill-side 'comunas' and spaces that were considered in deficit of green public spaces).



Image: The Urban Environmental Network- medellin.gov.co



Image: Columbia Road Interchange - medellin.gov.co

- Medellín's Corredores Verdes has successfully helped the city mitigate its urban island effect and helped reduce average city temperatures by 2°C, enabled carbon uptake via plant growth, captured particulate matter (PM2.5) to improve air quality, and increased urban biodiversity thanks to creation of more wildlife-friendly habitats (C40 Knowledge, no date; González Pantoja, 2019).
- Notably, the project created an intervention along the edge of the city that is bordered with mountain ridges to address ecological, social, and economic issues (such as mitigating the risk of landslides, training residents in agriculture for their self-sufficiency; and legalising informal housing to lessen displacement).
- By planting more than 308 trees, 240 palm trees, and more than 90,000 smaller plants – the city created a haven for citizens and wildlife alike. Similarly, by targeting the city's busiest areas and those with most inequitable access to resources, the city has effectively created impact at various levels: ecological, social, and structural. Through ongoing policies and public participation, Medellín seeks to be Colombia's 'ecocity'.

Integrated, nature-based policies

Colombian legislation dedicates that a part of cities' budgets – Participatory Budget – is to be invested in projects which citizens help to select through a democratic vote.

- The Corredores Verdes received a popular mandate though this vote, enabling it to be implemented across the city.
- Furthermore, as part of this initiative, Medellín invested 16.3 million pesos to involve 75 citizens hailing from disadvantaged backgrounds to be trained by the city's Joaquin Antonio Uribe Botanical Garden to become city gardeners and planting technicians.

In this sense, this project is an example of a coordinated effort from political initiatives, to legislated frameworks, and citizen participation and engagement.

To continue their sustainability efforts, Medellín's Secretary of Physical Infrastructure has mandated that every project they lead needs to have an ecological component that has tangible outcomes for citizens and fauna alike.

• To this end, the city's council approved a new development that is focused on advancing the notion of becoming Colombia's ecocity.

This plan has an investment of 22.7 billion Colombian pesos (over 4 billion pounds) and has four main indicators of success: sustainable mobility; clean and renewable sources of energy; increasing green spaces; and attention to rural areas.



Image: "Medellin, Colombia" by szeke

Vitoria-Gasteiz, Spain

Challenging over-population and natural landscape degradation

Vitoria-Gasteiz is the capital city of the autonomous community of the Basque Country. It is set in a landscape that is largely occupied by agricultural and urban uses, as well as a series of heavily forested mountain ranges. In the 1950s and 60s, the city had an exponential increase in population, whilst also facing decades of degradation of its natural landscape.

To alleviate these issues, the city created its Environmental Studies Centre (CEA) and began a series of redevelopment projects with the aim to connect a series of suburban green spaces in a concentric manner to create a natural continuum around the city.

The resulting Anillo Verde (Green Belt) of Vitoria-Gasteiz enabled the city to create better integration between nature and city, create a natural border, and increase plant and animal biodiversity.

Large proportions of green areas per inhabitant

The Anillo Verde was created with four objectives: to promote the conservation and restoration of natural spaces; to integrate the city with parks to improve accessibility to green areas; to develop spaces for public enjoyment; and to encourage environmental awareness and education.

- The CEA established the main elements that would make up the Anillo Verde, thereby imposing limits on the natural landscape and to prevent fragmentation of these spaces.
- The resulting layout was an uninterrupted loop around the city consisting of tree-lined hedges and stretches of riverbanks, to degraded areas such as rubbish tips and abandoned gravel pits.
- Thanks to the Anillo Verde, Vitoria-Gasteiz has one of the largest proportions of green areas per inhabitant in Europe, with roughly 25 square meters per capita in 2012.
- Today, the Anillo Verde is a circular route 30.8 km in length and consists of 6 consolidated parks that offer a large number of different environments (from woods to meadows, to rivers and wetlands).



Image: El Anillo Verde - vitoria-gasteiz.org



Image: Salbura Park lagoon - vitoria-gasteiz.org



Image: Zabalgana Park - vitoria-gasteiz.org

Municipal entity with a mission for sustainable development

The current mission of the CEA is to look out for the sustainability in Vitoria-Gasteiz, linking development to its broader environmental context of the Álava plains.

The CEA's structure is split into three thematic departments:

- environmental awareness and promotion of urban sustainability culture (which includes civic participation and sport on the Anillo Verde);
- information and management innovation for sustainability (such as implementing strategies for sustainable mobility);
- and study, analysis and evaluation of sustainability (which supports and funds research towards institutional frameworks aligned with the Department of the Environment).

District level interventions

In the Lakua neighbourhood 20 different green infrastructure interventions are being trialled across 50 different locations, with the intention of extrapolating them throughout the rest of the city districts.

This includes actions in green areas (parks, central reservations and roundabouts) as well as in municipally-owned vacant plots.

In green areas interventions include naturalisation of central reservations, urban woods on roundabouts, increasing soil permeability and strengthening trees in the roadway.

However, in transitory areas interventions such as agro-forestry (lavender and willow), urban forests, horticultural gardens and flower meadows are bring trialled.

The overall aim is to improve the environmental quality of the district by:

 Increasing urban biodiversity; reducing the urban heat island effect, reducing management and maintenance costs and giving the vacant plots a transitory use.



Image: location of pilot projects in Lakua - vitoriagasteiz.org



Image: cultivation of aromatic plants in vacant plot - vitoria-gasteiz.org

Rotterdam, Netherlands

Future proofing against climate change and population challenges

The bombing of 14 May 1940 almost destroyed the city of Rotterdam and four neighbouring cities. After the end of the war. Rotterdam had two main periods of reconstruction: one that focused on functional planning (Post-war reconstruction Community Rotterdam, no date) and a second focused on 'cozyfication' (Hans Renes, 2016) in lieu of having a historic centre to restore. It is no surprise then that Rotterdam considers itself the ultimate city of reconstruction. Today, the city faces new challenges with a growing population on limited urban spaces, the effects of climate change to rising sea levels, and (most recently) the effects of the COVID-19 pandemic. To address these challenges, the city has adopted a series of projects to futureproof the city (by becoming a leader in water management), to use their current urban spaces more effectively (by creating multipurpose roofs), and overall, to improve the quality of life for its citizens (starting with its most neglected neighbourhoods).

Multifunctional rooftops

Because the majority of Rotterdam is below sea level, the city has had to invest in innovative solutions to combat climate change. These include sponge parks to absorb water, sunken squares that double as water retention ponds, and offering subsidies to encourage building owners to retrofit their rooftops to become multifunctional spaces.

The city has a potential 18.5 square kilometre space of flat roofs that have the potential to help with water retention, generating sustainable energy, or creating terraces – all of which help add value to citizen's quality of life.

- To this end, the city council is offering subsidies for these rooftop transformations as well as differentiating between seven rooftop functions represented by different colours (for example green to increase biodiversity in the city; blue to store ware; red to house social functions; orange for mobility; and more)
- In addition to these subsidies, the city has created a Multifunctional Rooftops Tool so building owners can make investment

decisions and assess the value of their transformations.

- Whilst the city continues to attract building owners to adapt their rooftops (for example through the Rooftop Days festival and temporary installations connecting rooftops), these multifunctional roofs have already proven effective in combatting the effects of climate change.
- MVRDV (commissioned by the municipality of Rotterdam) have created a Roof catalogue, detailing 130 different ways in which a roof can be used. They aim to inspire not only individuals, but also developers and housing corporations to invest in their rooftops



Image: an example roofscape from the Roof Catalogue - MVRDR.nl

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Image - Multifunctional Rooftops Tool - rotterdam.nl

Rotterdam multifunctional roofs have contributed by reducing 19.5% of storm water overflow on an annual basis and by combatting the effects of urban heat islands.

Moreover, this initiative helps neighbourhoods come together to maintain these rooftops and to create social value and cohesiveness not only through funding by subsidies, but also by encouraging ownership through partnerships between private spaces (such as supermarkets) and the public to take over their rooftops.

Resilient neighbourhoods

In 2019, Rotterdam launched a project titled Resilient BoTu 2028 to empower two adjoining neighbourhoods (Bospolder and Tussendijken) to become the city's first resilient district.

- The programme aims to address the neighbourhoods' low social resilience scores (based on connectedness, satisfaction, capacity, participation, and living environment), as well as to building on previous interventions that successfully helped reduce debt and social isolation as well as to increase education and work opportunities.
- To this end, the programme launched with a call to action for creative entrepreneurs, citizens, private parties, and other organisations to contribute financially to the programme and to collaborate on systematic solutions for the area.
- The project involves the participation of over 500 neighbours and a variety of stakeholders who continue to assess the viability of projects in successive stages to fulfil the aims of the Resilient BoTu 2028 programme.



Image: "Dakakker Rotterdam" by Yuri Yabi



Image: a green roof in Rotterdam, rotterdamsedakengaden.net

Madrid, Spain

Urban regeneration outside the city centre

In 2016 the Madrid City Council launched a multi-year programme called Mad-RE (Madrid Recupera, or Madrid Recovers), with the aim to improve living conditions in the areas of the city with the lowest social, economic, and construction standards.

This led to a programme that operates in suburban areas of Madrid to create building interventions and subsidise work from small scale dwellings (houses and apartments) to large scale buildings. Overall, the programme aimed to help 39% of Madrid's municipal population (1.25 million people). Interventions financed through subsidies must address: accessibility improvements (such as installing lifts); improving energy efficiency (including HVAC and heating systems); and structural conservation or renovation (such as repairing roofs and façades).

In prioritising disadvantaged communities, Mad-RE has three overarching themes that are approached with different emphasis,

both according to the needs of the various neighbourhoods and on a year-by-year basis.

These themes are: social challenges, public spaces, and mobility. As such, in the 2019 - 2030 phase, the programme includes 375 projects where: 37% are improving public spaces, 27% improve urban mobility, 4% improve environmental sustainability, 13% regenerate neighbourhoods, and 19% propose new central areas.

Digitised municipal planning

Madrid City Council created an online tool to ensure that citizens are informed about the different phases of the Mad-RE programme and to see which themes have been responded to in which areas. This platform enables citizens to freely access information about the recuperation and revitalisation projects that have taken place, where they have taken place, and to view the history of the sites throughout these interventions through Story Maps.

Story Maps enable citizens to have a detailed view of a neighbourhood through a combination of text, images, geographical information, and a multimedia archive.



Image: Storymap showing the location of the 375 projects from the Mad-RE programme - obrasurbanas.es

These maps help provide context (and existing gaps) for the works that take place as well as the four networks that connect all projects – to each other and to the broader city (Ayuntamiento de Madrid, no date). These are:

- The proximity network shows how accessible and pedestrianised basic facilities (from shops to parks) are
- The identity network identifies places that have historic, heritage and cultural value (including places for gatherings and leisure)
- The mobility network classifies the different road systems, including cycling routes
- The environmental network shows all green spaces, from tree-lined streets to sport facilities

Although these maps are described to encourage citizen participation, they seem to work more as repositories of information and as an example of transparent communication. Overall, Mad-RE programme seeks to create a sustainable and socially inclusive city through planning, construction, and the coordinated activities between government officials and relevant consultants and suppliers.



Image: the networks of Madrid - Proximity (top left), Identity (top right), Mobility (bottom left) and Environmental (bottom right) - estratagiaurbana.madrid.es

San Francisco, USA

Empowering communities to create & use green spaces

The San Francisco Parks Alliance (SFPA) is a philanthropic and advocacy organisation dedicated to parks, recreation and open spaces. It was founded in 2011 by the city's two leading parks non-profit organisations, the Neighbourhood Parks Council and San Francisco Parks Trust.

The SPFA:

- Supports communities by providing resources (including funding) to those who seek to transform an unused parcel of land in their neighbourhoods;
- Encourages people to explore their parks through event programming and provides city-wide advocacy that expands the public realm, makes public spaces more equitable, and supports public spaces that are environmentally and financially sustainable;

 Aims to empower communities and engage public agencies to create green public spaces.
By partnering with a variety of stakeholders, communities work to champion and transform their neighbourhoods.

One of the highlights of the SFPA is their Community Partner Network, a group of passionate and knowledgeable stewards who seek to create stronger communities by creating green spaces.

- Currently, the Network consists of 80+ fiscally sponsored Community Partners, 150+ additional public space stewards through the Street Parks program, and 25+ missionaligned organizations
- The SFPA helps partners through mentorship, sharing resources, and continuous engagement through programming and communication.

- Eligible partners are chosen on their ability to demonstrate their organisational skills, their long-term vision for the sustainability of their project, and their capacity to organise volunteers and conduct outreach.
- Successful applicants enjoy a variety of services from SFPA, including facilitated networking based on project needs, tax exempt status for their project, dedicated online spaces, and assistance with donations.

Community-managed spaces on city-owned land

The Street Parks Program is a partnership that involves various stakeholders throughout San Francisco who wish to create community managed spaces on city-owned land. The programme started in 2004 and since then, more than 100 Street Parks have been developed.



30 Future Parks Accelerator - Global Greenspace Leadership Research

Image: members of the Community Partner Network - SFPA

Each project is unique - Street Parks can function as ornamental gardens, places of recreation, community meeting spaces, wildlife habitat, and more.

Stakeholders include:

- Public Works responsible for confirming suitability of land parcels for renewal. They also review maintenance plans and ensure they are up to code. In addition, they provide resources such as tool loans and green waste pick up
- San Francisco Parks Alliance provides information on funding and guidance for site development, as well as fiscal sponsorship services
- Street Park Stewards neighbourhood leaders who are project leads with various responsibilities including park maintenance for a minimum of three years. Stewards must live within three blocks of the project site.

In the process of applying to create a new Street Park, stewards are required to engage in community outreach.

- It is recommended that stewards have the buyin from their neighbours and to build a group of volunteers, as well as to have continuous communication with these groups.
- Stewards are asked to have meetings at all stages of the project so that communities can help design the site, create a budget and

propose a maintenance plan.

Although stewards have a range of responsibilities towards their project, they can find support from SFPA through supplies (such as gardening tools), provide workers to help with tasks, and provide workshops focusing on sustainable design. Street Parks are developed from the community up on smaller fragments of Public Works-owned land (such as rights-of-way; along sidewalks; and traffic circles). These spaces, therefore, help beautify and increase safety in neighbourhoods, increase biodiversity, activates underutilised spaces, and enhance the value of adjacent properties.

This results in distinctive neighbourhood spaces that are purposeful and valuable to the communities that build and maintain them.



Image: Athens Avalon GreenSpace by the San Francisco Parks Alliance

2. What we've learned from across the globe

Key takeaways

There are **common threads** running through the work that has been undertaken in each of the 12 cities we have showcased in the case studies.

> Make sure co-production engages a cross-section of society rather than already hyper-engaged organisations and individuals. The development of all greenspace needs to be geared towards producing equitable results for all communities.

Implement co-production methodologies throughout any strategies and projects. This helps to engage community stakeholders and bring them on board with the implementation of greening. Undertake gradual measures to offset the impact of the work taking place, for example, changing traffic signs and vehicle routes.

Be iterative and holistic in approach, for instance take note of how these measures impact other areas of the city and react to any issues.

Utilise land available to create community projects that will develop pockets of greening in dense parts of the city, such as biodiverse meadows, urban agriculture community gardens and allotments. This can be volunteer led, as well as charging subsidised rent.

Utilise data to understand how your current greenspace sites are being used. This will help provide insight into long-term planning of how these open spaces need to be maintained. Work with private companies and developers to implement green areas on buildings, such as roof space. This could be done as part of the company's ESG and Corporate Social Responsibility initiatives. Adopt an ecosystem approach that enables you to strategise how different projects can be linked together to use funding more effectively, for example, linking bicycle network funding with the development of green corridors.

Develop a greening fund that is financed through charging private developers for the removal of trees and/or develop a climate bond that incentivises investors to invest in sustainability projects.

Make your greenspaces multi-functional. Places can serve a wide range of social, economic, ecological and sustainable objectives.

Recognise when initiatives need to evolve. Greenspaces that were developed over a decade ago may no longer adequately serve the needs of their communities. Find ways to update spaces to ensure that they better suit the current needs of communities.

Make sure that your greenspaces are functional throughout the year. In particular, consider how spaces could be adapted to make them safer, more usable and appealing during the winter months. If you're looking to find out more about how cities went about making the change, then the table below identifies the key strategies that they implemented. The first 6 cities also have a full length case study available on the Future Parks Accelerator website https://www.futureparks.org.uk/ To find out more about the work in all 12 cities, you will find an extensive bibliography on the following pages

Category	Strategy	Barcelona	City of Paris	Melbourne	Lisbon / Almada	Edmonton	St.Louis	Berlin	Medellín	Vitoria- Gasteiz	Rotterdam	Madrid	San Francisco
Legal/policy measures	Precinct structure plans			•••								•	
	Sustainability/greening mandates	•••	•••	••	•	•••	•••		•••	•••		••	
	Master plans	•••	••	••	•••	•••	•••	••		••			
	Plans for legislative changes	•	••			•		••				•••	
	15-minute city policy		•••				•						
	National/local political policy	•••	•••	••	•••	•••		••					
	Gradual infrastructure interventions	••				••	•						
	New Municipal departments/committees	•••	••	••	•	••		•••					
Council land use	Community allotment plots				•••			••					
	Community gardens / public space	•••	•••	•	•••		•••	••	•••	•••	•••		•••
	Community volunteer support				•••			•••					•••
	Interconnected greenway system				•••	••	•••		•••	•••			
Digital platforms	Public participation programmes	•••		••			•				••	•••	
	Participatory democratic governance	•••										•••	

Key

Some evidence •

Moderate evidence ••

Strong evidence •••

Category	Strategy	Barcelona	City of Paris	Melbourne	Lisbon / Almada	Edmonton	St. Louis	Berlin	Medellín	Vitoria- Gasteiz	Rotterdam	Madrid	San Francisco
Community consultation/ co-creation	Community workshops			•••		••	•••	•••					
	Civil servant inter-departmental workshops	•••					•						
	Self-organised workshops	•••											
	Face-to-face workshops	•••					••						
	Consulting firms oversee co-production	•••					••						
	Citizen co-development of strategies	•••	••	••	•	••	•••	•••		•	••		
Funding	Biodiversity initiatives				•••				•••				
	Grants for private businesses & residents			•••									
	Real estate investment opportunities		•••								••		
	Private realm & community-led programmes			•••		•						••	•••
	Council/local government funding or taxes	•••		•		•••	•••	•••					••
	Private/developer funding		••	•••							••		
	Climate bonds/local taxes		•••				•••	•••					
	Ecological compensation				•••								
	Combining funding streams				•••	•			•••				
Climate change/Ecology	Improving/maintaining biodiversity	••		••	••	•••			•••	•••	••		••
	Water management	•		••	•		••				••		

Кеу

Some evidence • Moderate evidence •• Strong evidence ••

3. Bibliography

Bibliography: In-depth case studies

Barcelona

Adaptive ecology and climate change

Climate Adapt (2016) Barcelona trees tempering the Mediterranean city climate - https://climate-adapt.eea.europa.eu/metadata/ case-studies/barcelona-trees-tempering-the-mediterranean-cityclimate

Calvet-Mir L. & March, H. (2019) Crisis and post-crisis urban gardening initiatives from a Southern European perspective: The case of Barcelona. European Urban and Regional Studies. Vol. 26(1) 97-112 - https://journals.sagepub.com/doi/ pdf/10.1177/0969776417736098

De Luca, C. et al (2021) Adaptive resilience of and through urban ecosystem services: a trans-disciplinary approach to sustainability in Barcelona. Ecology and Society 26(4):38 - https:// ecologyandsociety.org/vol26/iss4/art38/

Ajuntament de Barcelona strategy documents

Ajuntament de Barcelona. Barcelona: Building a resilient city https://ajuntament.barcelona.cat/ecologiaurbana/sites/default/ files/ModelResilienciaBarcelona.pdf

Ajuntament de Barcelona (2013) Barcelona Green infrastructure and Biodiversity Plan 2020 - https://ajuntament.barcelona.cat/ ecologiaurbana/sites/default/files/Barcelona%20green%20 infrastructure%20and%20biodiversity%20plan%202020.pdf

Àrea d'Ecologia Urbana (2017) trees for life: master Plan for barcelona's Trees 2017-2037. Ajuntament de Barcelona - https:// ajuntament.barcelona.cat/ecologiaurbana/sites/default/files/Pladirector-arbrat-barcelona-ENG.pdf

Co-production

Barcelona + Sostenible (2015) Barcelona's Commitment to the Climate. Adjuntament de Barcelona - https://ajuntament. barcelona.cat/ecologiaurbana/sites/default/files/Barcelona%20 Commitement%20to%20Climate.pdf

Dedidim Barcelona website - https://www.decidim.barcelona/

Satorras, M et al. (2020) Co-production of urban climate planning: Insights from the Barcelona Climate Plan. Cities. Vol. 106 - https://www.sciencedirect.com/science/article/pii/ S026427512031235X#t0015

Tree Masterplan

Baró, F. et al. (2019) Under one canopy? Assessing the distributional environmental justice implications of street tree benefits in Barcelona. Vol. 102, 54-64 - https://www.sciencedirect. com/science/article/pii/S1462901119306276

C40 Cities (2017) Cities100: Barcelona - Managing Trees for a Healthier City. C40 Cities - https://www.c40.org/case-studies/ cities100-barcelona-managing-trees-for-a-healthier-city/

C40 Cities (2017) Trees for Life: Master Plan for Barcelona's Trees 2017 - 2037. C40 Cities - https://www.c40knowledgehub.org/s/ article/Trees-for-Life-Master-Plan-for-Barcelona-s-Trees-2017-2037?language=en_US&gclid=CjoKCQjwio6XBhCMARIsACou9aGLKg QXwoqtDtRgiZa6TK4gefXONTavCfYDIhsAC-JYte2lti88Ld0aAjErEALw_ wcB

Superblocks

Adjuntament de Barcelona (2021) Superblock Barcelona: Towards the city we want. Adjuntament de Barcelona - https://ajuntament. barcelona.cat/superilles/sites/default/files/20210202_Superblock_ Barcelona_web.pdf

Bausells, M. (2016) Superblocks to the rescue: Barcelona's plan to give streets back to residents. The Guardian - https:// www.theguardian.com/cities/2016/may/17/superblocks-rescuebarcelona-spain-plan-give-streets-back-residents?CMP=fb_acities_b-gdncities

Bausells, M. (2016) Story of cities #13: Barcelona's unloved planner invents science of 'urbanisation'. The Guardian - https://www. theguardian.com/cities/2016/apr/01/story-cities-13-eixamplebarcelona-ildefons-cerda-planner-urbanisation

C40 Cities (2016) Cities100: Barcelona - Redefining City Blocks to Tackle Traffic-Related Emissions. C40 Cities - https://www.c40.org/ case-studies/cities100-barcelona-redefining-city-blocks-to-tackletraffic-related-emissions/ C40 Cities (2018) The implementation of the Superblocks programme in Barcelona: Filling our streets with life. C40 Cities https://www.c40.org/case-studies/barcelona-superblocks/

Frago, L. (2021) Public space and the green city: Conflictual narratives of the superblock programme in Poblenou, Barcelona. Journal of Urban Regeneration and Renewal. Vol. 15, 1, 1-17 - www.researchgate.net/profile/Lluis-Frago-Clols/ publication/358581236_Journal_of_Urban_Regeneration_and_ Renewal/links/620a2586cf7c2349ca12e86a/Journal-of-Urban-Regeneration-and-Renewal.pdf

Paris

15 minute city

Moreno, C. et al. (2021) Introducing the "15-Minute City": Sustainability, Resilienceand Place Identity in Future Post-Pandemic Cities. Smart Cities. Vol. 4, 93-111.

Pozoukidou, G. et al. (2021) 15-Minute City: Decomposing the New Urban Planning Eutopia. Sustainability, 13, 928.

Biodiversity

Municipality of Paris. (2022) Biodiversity in Paris - https://wwwparis-fr.translate.goog/pages/biodiversite-66/?_x_tr_sl=fr&_x_tr_ tl=en&_x_tr_hl=en&_x_tr_pto=sc

Climate bonds and finance

C40 (2015) Cities100: Paris - Dedicated Climate Bonds for Cities - https://www.c40.org/case-studies/cities100-paris-dedicatedclimate-bonds-for-cities/

Climate Adapt (2016) Climate bond financing adaptation actions in Paris - https://climate-adapt.eea.europa.eu/metadata/casestudies/climate-bond-financing-adaptation-actions-in-paris

Mairie de Paris (2018) Paris Climate Action Plan - https://cdn. locomotive.works/sites/5ab410c8a2f42204838f797e/content_ent ry5ae2f905a2f4220ae645f026/5af7316614ad660b652531de/files/ Paris_-Paris_Climate_Action_Plan.pdf?1526890697

Green politics and climate change policy

Chrisafis, A. (2018) Paris: legal challenge to car-free promenade by Seine. The Guardian - https://www.theguardian.com/world/2018/ feb/22/paris-car-free-right-bank-court-ruling-seine

GlobalData (2021) Paris to become the city of enlightened sustainable infrastructure. Verdict - https://www.verdict.co.uk/ paris-eco-friendly-europe/

Masson, V. et al. (2013) "Grand Paris": regional landscape change to adapt city to climate warming. Climatic Change 117, 769-782 https://link.springer.com/article/10.1007/s10584-012-0579-1

Méheut, C. (2022) Plans to Fight Global Warming Face an Obstacle in Paris: Trees. The New York Times - https://www.nytimes. com/2022/07/18/world/europe/paris-trees-global-warming.html

Municipality of Paris. (2022) Act for the Climate - https://www. paris.fr/dossiers/volontaire-du-climat-7

Nordstrom, L. (2021) Residents react to Mayor Hidalgo's plans for a '100% bikeable' Paris. France 24 - https://www.france24.com/en/ france/20211103-residents-react-to-mayor-hidalgo-s-plans-for-a-100-bikeable-paris

Oliver, H. (2020) 10 huge building projects that'll change our cities for ever. Time Out - https://www.timeout.com/things-to-do/ massive-urban-developments-changing-city-skylines-by-2030

Oliver, H. (2021) How Paris plans to become Europe's greenest city by 2030. Time Out - https://www.timeout.com/paris/en/things-todo/paris-green-sustainable-city-plan-2030#:~:text=At%20the%20

Organic food production

C40 (2019) Cities100: Paris is boosting local food production for an equitable food system - https://www.c40knowledgehub.org/s/ article/Cities100-Paris-is-boosting-local-food-production-for-anequitable-food-system?language=en_US

PLU Bioclimatique

C40 (2019) Cities100: Paris is using blue and green infrastructure to tackle city heat - https://www.c40knowledgehub.org/s/article/ Cities100-Paris-is-using-blue-and-green-infrastructure-to-tacklecity-heat?language=en_US Municipality of Paris. (2022) Revision of the local bioclimatic urban plan: what face for Paris in 2030? - https://www-paris-fr.translate. goog/pages/la-revision-du-plan-local-d-urbanisme-plu-17018?_x_ tr_sl=fr&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc

Urban gardening and citizen engagement

AIPH (2022) Paris, France Initiative: Getting everyone involved in greening the city - https://aiph.org/green-city/guidelines/ case-studies/paris-france-biodiversity/?utm_source=Email&utm_ medium=Email&utm_campaign=GGCU

Arnarsdóttir, H. (2020) Paris Encourages All Citizens to Become Urban Gardeners. Pop Up City - https://popupcity.net/observations/ paris-encourages-all-citizens-to-become-urban-gardeners/

Greening Infrastructure consultancy. The Greening Permit In Paris - https://greeninfrastructureconsultancy.com/the-greening-permitin-paris/

Municipality of Paris. (2022) The permit to vegetate - https://www. paris.fr/pages/un-permis-pour-vegetaliser-paris-2689

Melbourne

City of Melbourne

City of Melbourne (2022) City of Melbourne organisational structure - https://www.melbourne.vic.gov.au/SiteCollectionDocuments/ organisational-structure.pdf

Greening Laneways

City of Melbourne (2022) Greening Laneways. City of Melbourne https://www.melbourne.vic.gov.au/community/greening-the-city green-infrastructure/Pages/greening-laneways.aspx

Urban Forest, ecology and climate change policy

Callow, D. (2013) Urban Forest data at the City of Melbourne. City of Melbourne - https://202020vision.com.au/media/72462/david-callow-drivers.pdf

Centre for Public Impact (2016) Responding to climate change: melbourne's urban forest strategy - https://www. centreforpublicimpact.org/case-study/urban-forest City of Melbourne (2022) Adapting to climate change. City of Melbourne - https://www.melbourne.vic.gov.au/about-council/ vision-goals/eco-city/Pages/climate-change-adaptation-strategy. aspx

City of Melbourne (2022) Gardens for Wildlife. City of Melbourne https://www.melbourne.vic.gov.au/community/greening-the-city/ urban-nature/gardens-wildlife/Pages/gardens-for-wildlife.aspx

City of Melbourne (2022) Climate Change Mitigation Strategy. City of Melbourne - https://www.melbourne.vic.gov.au/aboutcouncil/vision-goals/eco-city/Pages/climate-change-mitigationstrategy.aspx#:~:text=ln%202018%2C%20City%20of%20 Melbourne,gas%20emissions%20in%20the%20municipality.

City of Melbourne (2020) How to grow an urban forest. City of melbourne & Department of Environment, land, Water & Planning - https://www.greenerspacesbetterplaces.com.au/media/163136/ howtogrowanurbanforest.pdf

City of Melbourne (2011) Urban Forest Diversity Guidelines: tree species selection strategy for the City of Melbourne - https://www. melbourne.vic.gov.au/SiteCollectionDocuments/urban-forestdiversity-guidelines.pdf

City of Melbourne (2022) Urban Forest Precinct Plans. City of Melbourne - https://www.melbourne.vic.gov.au/community/ greening-the-city/urban-forest/Pages/urban-forest-precinct-plans. aspx

City of Melbourne (2022) Urban Forest. City of Melbourne - https:// www.melbourne.vic.gov.au/community/greening-the-city/urbanforest/Pages/urban-forest.aspx

City of Melbourne (2022) Urban Forest Strategy. City of Melbourne - https://www.melbourne.vic.gov.au/community/greening-the-city/ urban-forest/Pages/urban-forest-strategy.aspx#:~:text=We%20 will%20achieve%20this%20by,improving%20vegetation%20 health

Naturvation (2017) Snapshot - Melbourne: Urban Forest Strategy. Naturvation.eu - https://naturvation.eu/sites/default/files/ melbourne snapshot.pdf

State of Victoria (2021) Gardens for Wildlife Victoria - https://gardensforwildlifevictoria.com/

Urban Forest Fund

City of Melbourne (2022 Funded projects. City of Melbourne https://www.melbourne.vic.gov.au/community/greening-the-city/ urban-forest-fund/funded-projects/Pages/funded-projects.aspx

City of Melbourne (2022) Melbourne's Urban Forest Fund. City of Melbourne - https://www.melbourne.vic.gov.au/community/ greening-the-city/urban-forest-fund/Pages/urban-forest-fund.aspx

City of Melbourne (2022) Support the Urban Forest Fund. City of Melbourne - https://www.melbourne.vic.gov.au/community/ greening-the-city/urban-forest-fund/Pages/support-urban-forestfund.aspx

Public engagement and volunteering programmes

City of Melbourne (2022) Become a Citizen Forester. City of Melbourne - https://www.melbourne.vic.gov.au/community/ greening-the-city/urban-forest/pages/become-a-citizen-forester. aspx

City of Melbourne (2022) Partipate Melbourne (website) - https://participate.melbourne.vic.gov.au/

Participate Melbourne (2022) Citizen Forester programme - https://participate.melbourne.vic.gov.au/citizenforester?_ ga=2.248870788.2012780108.1653506433-1465963548.1653506433

Lisbon & Almada

Biodiversity meadows and green corridors network

d´Araújo Mata, Duarte (2019) The Green Corridors Network as the background of a NBS approach in Lisbon, Portugal. Oppla - https:// oppla.eu/casestudy/23360

Lisbon City Council (2022) Environment: Green Corridors - https:// www.lisboa.pt/cidade/ambiente/entrada

Ecology and climate change

Galli, A. et al. (2020) Assessing the Ecological Footprint and biocapacity of Portuguese cities: Critical results for environmental awareness and local management. Cities. Vol. 96 - https://www. sciencedirect.com/science/article/pii/S0264275119302306 IUCN (2007) Lisbon marks major shift in convergence between business and biodiversity - https://www.iucn.org/content/ lisbon-marks-major-shift-convergence-between-business-andbiodiversity

Lisboa Information and Services (2022) Environment and climate change - https://www.lisboa.pt/cidade/ambiente/alteracoesclimaticas

Louro Alves, F. et al (2018) A Strategy for urban biodiversity , Lisbon's case study. Oppla - https://oppla.eu/casestudy/19266

Santos, A. et al (2015) Lisbon, Portugal – Case study portrait, part of a GREEN SURGE study on urban green infrastructure planning and governance in 20 European cities. Researchgate - https:// www.researchgate.net/publication/275957689_Lisbon_Portugal_-_ Case_study_portrait_part_of_a_GREEN_SURGE_study_on_urban_ green_infrastructure_planning_and_governance_in_20_European_ cities

LIFE LUNGS project and EU funding

Câmara Municipal de Lisboa (2022) LIFE LUNGS website - https:// life-lungs.lisboa.pt/en/

Câmara Municipal de Lisboa (2022) LIFE LUNGS Project Changes with which we all win - https://life-lungs.lisboa.pt/fileadmin/ lifelungs/documentos/fact_sheet.pdfUrban ecology, green infrastructure and climate change

Baker, F. (2019) Lisbon's urban ecosystem services and green infrastructure. Manchester Metropolitan University - https://www. mmu.ac.uk/media/mmuacuk/content/images/school-of-scienceand-the-environment/urban-environments/Lisbons-urbanecosystem-services-and-green-infrastructure.pdf

European Commission (2020) Application Form for the European Green Capital Award 2020 - https://ec.europa.eu/environment/ europeangreencapital/wp-content/uploads/2018/07/Indicator_4_ Lisbon_EN.pdf

European Commission (2020) Lisbon: European Green Capital 2020 - https://cidadania.lisboa.pt/fileadmin/atualidade/publicacoes_ periodicas/ambiente/brochura_lisboa_capital_verde_europeia_2020. pdf Sustain Europe (2020) Lisbon European Green Capital 2020 - https://www.sustaineurope.com/lisbon-european-greencapital-2020-20201228.html

Lisbon green infrastructure and resilience policy

Lisboa Information and Services (2022) Urban Resilience - https:// informacoeseservicos.lisboa.pt/prevencao/resiliencia-urbana/ entrada

C40 Cities (2022) Lisbon, Portugal - https://www.c40.org/cities/ lisbon/

European Commission (2019) Towards a more resilient Lisbon UrbaN Green InfraStructure as an adaptation to climate change - https://webgate.ec.europa.eu/life/publicWebsite/index. cfm?fuseaction=search.dspPage&n_proj_id=7122

Lisbon City Council (2020) RESCCUE Lisbon Resilience Action Plan - https://toolkit.resccue.eu/wp-content/uploads/2020/11/Lisbon-Resilience-Action-Plan_Toolkit.pdf

Urban gardening and allotments

Cabral, I., & Weiland, U. (2016). Urban gardening in Leipzig and Lisbon: A comparative study on governance. In Growing in Cities: Interdisciplinary Perspectives on Urban Gardening. Conference Proceedings (pp. 66-79) - https://www.academia.edu/ download/48831040/artigo_BASEL_2016.pdf

Edmonton

Breathe

City of Edmonton (2022) About Breathe - https://www.edmonton. ca/city_government/initiatives_innovation/about-breathe

City of Edmonton (2022) Breathe - https://www.edmonton.ca/ city_government/initiatives_innovation/breathe

City of Edmonton (2022) Breathe Public Engagement - https:// www.edmonton.ca/city_government/initiatives_innovation/survey

Edmonton: Biophilic City

Biophilic Cities (2016) Edmonton, Canada - https://www. biophiliccities.org/edmonton https://www.biophiliccities.org/edmonton

Edmonton Strategy Plans

City of Edmonton (2008) City of Edmonton Biodiversity Report - https://www.edmonton.ca/sites/default/files/public-files/ assets/PDF/BI0_DIVERSITY_REPORT_-_high_res_August2008. pdf?cb=1664200069

City of Edmonton (2019) Climate Resilient Edmonton: Adaption Strategy and Action Plan - https://cuspnetwork.ca/documents/ members/edmonton/casr/Climate_Resilient_Edmonton.pdf

City of Edmonton (2020) Edmonton City plan - https://www. edmonton.ca/public-files/assets/document?path=PDF/City_Plan_ FINAL.pdf

City of Edmonton (2007) Natural Area Systems Policy C531 https://www.edmonton.ca/sites/default/files/public-files/assets/ PoliciesDirectives/C531.pdf?cb=1664200069

City of Edmonton (2009) Natural Connections Biodiversity Action Plan - https://www.edmonton.ca/sites/default/files/public-files/ assets/PDF/Edmonton_Biodiversity_Action_Plan_Final.PDF

City of Edmonton (2007) Natural Connections Strategic Plan 2007 https://www.edmonton.ca/public-files/assets/document?path=PDF/ Natural_Connections_-_Strategic_Plan_JUNE_09.pdf

City of Edmonton (2022) Our Strategy for Biodiversity Protection - https://www.edmonton.ca/city_government/environmental_ stewardship/strategy-biodiversity-protection

Nature, Green Infrastructure and Wellbeing

Cheesbrough, A.E. (2015) Everyday Wild: How do preserved natural areas in the City of Edmonton contribute to adult perceptions of health and well-being? Masters thesis: University of Alberta - https://era.library.ualberta.ca/items/a36facbd-08ab-49ea-afe2f56f449a63a2

James, D. (2010) Nature and Infrastructure: Designing a new paradigm for urban growth in Edmonton, Alberta. Masters thesis. Dalhousie University Halifax, Nova Scotia - https://central. bac-lac.gc.ca/.item?id=MR68144&op=pdf&app=Library&oc lc_number=811404251

Public Engagement

Luo, J. (2020) Cultivating Green Space Together: Exploring the Collaborative Planning and Public Engagement of Green Space in Edmonton, Alberta. Masters thesis. University of Alberta https://era.library.ualberta.ca/items/coc55e12-7007-46eb-8ed4-899f95aa5855

River Valley Planning Modernization, Ribbon of Green and River Valley Area Redevelopment Plan

City of Edmonton (1985) North Saskatchewan River Valley Area Redevelopment Plan - https://www.edmonton.ca/sites/default/ files/public-files/assets/plans_in_effect/North_Saskatchewan_River_ ARP_Consolidation.pdf?cb=1664291753

City of Edmonton (2022) Ribbon of Green SW+NE - https://www. edmonton.ca/city_government/initiatives_innovation/ribbon-ofgreen-sw-ne

City of Edmonton (2022) River Valley Planning Modernization Project - https://www.edmonton.ca/city_government/initiatives_ innovation/ribbon-of-green

Edmonton Mountain Biking Alliance (no date) POSITION PAPER - City of Edmonton River Valley Planning Modernization Project (Ribbon of Green) - https://www.edmmtnbike.ca/position-papercity-of-edmonton-river-valley-planning/

ERVCC (2022) River Valley Planning Modernization - https://www. ervcc.com/river-valley-planning-modernizationnew-page

WinterCity Strategy

City of Edmonton (2018) Keep the Snowball Rolling: WinterCity Strategy Evaluation and Report - https://www.edmonton.ca/sites/ default/files/public-files/documents/COE_WinterCity_Evaluation_ Report_FINAL.pdf

City of Edmonton (2022) WinterCity Strategy - https://www. edmonton.ca/city_government/initiatives_innovation/wintercitystrategy

St. Louis

Brickline Greenway

Great River Greenway (2022) Brickline Greenway: Boyle Avenue to Sarah Avenue - https://greatriversgreenway.org/greenway/ brickline-greenway/

Great River Greenway (2022) Brickline Greenway:More than a path. It's a pulse - https://greatriversgreenway.org/brickline/

High Line Network (2022) Brickline Greenway, Saint Louis, MO https://network.thehighline.org/projects/brickline-greenway/

lamarjohnsoncollaborative (2021) The Brickline Greenway Framework Plan. issuu - https://issuu.com/ lamarjohnsoncollaborative/docs/small_framework_plan

KTRS 550am (2021) Great Rivers Greenway: High Line Network. Soundcloud - https://soundcloud.com/550ktrs/great-riversgreenway-high-line-network

Data

Great Rivers Greenway (2022) Betterment survey - https:// greatriversgreenway.org/betterment/

St. Louis Post-Dispatch (2021) Great Rivers Greenway, seeing a boom in trail users during the pandemic, seeks input with survey - https://www.stltoday.com/entertainment/great-rivers-greenwayseeing-a-boom-in-trail-users-during-the-pandemic-seeks-inputwith/article_1ceac81d-d84b-56a3-9981-c33bbeadaof8.html

Great Rivers Greenway strategy, aims and objectives

Great Rivers Greenway (2004) Building the River Ring: A Citizen-Driven Regional Plan - https://greatriversgreenway.org/citizendriven-regional-plan-2004/

Great Rivers Greenway (2011) Citizen-Driven Regional Plan Update 2011 - https://greatriversgreenway.org/2011-regional-plan-update/

Great Rivers Greenway (2016) Citizen-Driven Regional Plan Update 2016 - https://greatriversgreenway.org/wp-content/ uploads/2015/05/FINAL-2016-Regional-Plan.pdf

Great Rivers Greenway (2018)Engagement Strategy - https:// greatriversgreenway.org/wp-content/uploads/2018/02/ Engagement-Strategy-FINAL.pdf

Great Rivers Greenway (2022) Great Rivers Greenway Foundation - https://greatriversgreenway.org/support/

Great Rivers Greenway (2022) Regional Partnerships - https:// greatriversgreenway.org/about-us/projects-in-partnership/?int_SE M&campaignid=1533970555&adgroupid=131477924590&creative=54 7781544238&matchtype&network=g&device=c&keyword

Great Rivers Greenway District

St. Louis Public Radio (2013) What's the Great Rivers Greenway District? - https://news.stlpublicradio.org/economybusiness/2013-11-01/whats-the-great-rivers-greenway-district

Great Rivers Greenway (2021) Great Rivers Greenway: the first 20 years - https://issuu.com/grgstl/docs/grg20thbooklet

Greenways network

ASLA (2019) +StL: Growing an Urban Mosaic in St. Louis - https:// www.asla.org/2019awards/640658-StL_Growing_An_Urban_Mosaic_ In_St_Louis.html

Swanstrom, T. and Tranel, M., 2008. If You Can Make It in St. Louis, You Can Make It Anywhere. National Civic Review - https://d1wqtxts1xzle7.cloudfront.net/47660143/Regional_ system_of_greenways_lf_you_can_20160730-8794-z9hq1h-libre. pdf?1469939406=&response-content-disposition=inline%3B+file name%3DRegional_system_of_greenways_lf_you_can.pdf&Expire s=1664476644&Signature=Zwk61yXLeyT3O-UaBVT0k2w0cxj-Q7g9 5K5wxtrxERusPnj2L9Q5YDjPNEaPNx0wsISkrck5WRyxkx4XzymA2 pTkXIrTaS4EFtC-WIv468~zqnLMEIPg67s4QbWY~yz0FLzmxzXS8n B0W4q7RW5~SAAAy0IjF0Pc90M1pnj7y08m0eUefltTP3YB7r3Uyg bznyHoenfk5ZGara40kdlunPiAZb~WW6Y138S-HwlyPMIP~UJ9Pp-7qNP3-goVkyE5GUK-PEY1Ccr3KebobKwMXdyRKQJ40A1tfsyvT0UQaX dwk8AS7nCNiiliEMeAWqXU7KSqeG8v5qYK7qp3jyePbw_&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA

Bibliography: Other shortlisted case studies (summary profiles)

Berlin

Legal/policy measures

Berlin Tourismus & Kongress GmbH, no date. What is Sustainable Meetings Berlin? [WWW Document]. Visit Berlin. URL https:// convention.visitberlin.de/en/what-sustainable-meetings-berlin

Council land use

berlin.de, 2020. Park Tempelhofer Feld [WWW Document]. Parks and Gardens. URL https://www.berlin.de/en/parks-andgardens/3561883-4407152-park-tempelhofer-feld.en.html

Beveridge, R., Naumann, M., 2016. Contesting neoliberalism in an 'activist city': working towards the urban commons in Berlin. Soundings: A journal of politics and culture 64, 88-93.

Kabisch, N., Haase, D., 2014. Green justice or just green? Provision of urban green spaces in Berlin, Germany. Landscape and Urban Planning 122, 129–139. https://doi.org/10.1016/j. landurbplan.2013.11.016

Lachmund, J., 2021. The Invention of the Ruderal Area. Urban Ecology and the Struggle for Wasteland Protection in West-Berlin. Presented at the Sensing and Shaping the City, RC21, University of Antwerp, p. 15.

Community consultation/co-creation

Senatsverwaltung für Stadtentwicklung und Wohnen, no date. Guidelines for the participation of citizens in urban spatial development 3.

Urban Gardening Manifest, 2018. Urban Gardening Manifest [WWW Document]. URL https://urbangardeningmanifest.de/ (accessed 9.29.22).

Funding

Felix, A. et al. (2016) 'Public investment in the Berlin state budget: Education and transport are falling short', DIW Economic Bulletin, 6(29/30), pp. 346-355.

Project context/examples

ECF Farmsystems Berlin, no date. PLANNING, CONSTRUCTION & OPERATION [WWW Document]. URL https://www.ecf-farmsystems. com/planungbaubetrieb?lang=en (accessed 9.29.22).

Fluss Bad Berlin, no date. Ein Flussbad in Berlins Mitte [WWW Document]. URL https://www.flussbad-berlin.de/ (accessed 9.29.22).

Green Berlin [WWW Document], 2022. . Sustain Europe. URL https://www.sustaineurope.com/green-berlin-20190422.html (accessed 9.29.22).

Grün Berlin GmbH, 2022a. About the project Platz der Luftbrücke [WWW Document]. URL https://gruen-berlin.de/en/projects/urbanopen-spaces/platz-der-luftbruecke/about-the-project (accessed 9.29.22).

Grün Berlin GmbH, 2022b. Natur Park Südgelände [WWW Document]. URL https://gruen-berlin.de/en/projects/parks/naturpark-suedgelaende (accessed 9.29.22).

Himmelbeet gemeinnützige GmbH, no date. Startseite -Himmelbeet Gemeinschaftsgarten [WWW Document]. URL https:// himmelbeet.de/ (accessed 9.29.22).

Infarm, 2022. About us [WWW Document]. URL https://www. infarm.com/about-us/ (accessed 9.29.22).

Mackrodt, U., 2019. How atmospheres inform urban planning practice – insights from the Tempelhof airfield in Berlin. Ambiances. Environnement sensible, architecture et espace urbain. https://doi.org/10.4000/ambiances.2739

Natur Park Schöneberger Südgelände and Berlin's Urban Nature, 2022. . Fondazione Benetton Studi Ricerche. URL https://www.fbsr. it/en/landscape/the-international-carlo-scarpa-prize-for-gardens/ sites-awarded/natur-park-schoneberger-sudgelande-la-naturaurbana-berlinese/ (accessed 9.29.22).

Senatsverwaltung für, Umwelt, Mobilität, Verbraucher- und Klimaschutz, 2022. Senatsverwaltung für Umwelt, Mobilität, Verbraucher- und Klimaschutz [WWW Document]. URL https:// www.berlin.de/sen/uvk/ (accessed 9.29.22).

Spreepark, no date. Participation [WWW Document]. URL https://www.spreepark.berlin/en/participation/ (accessed 9.29.22).

Medellín

Legal/policy measures

Concejo de Medellín, 2022. La cuarta Línea Estratégica "Ecociudad" fue presentada a Concejales [WWW Document]. URL https:// www.concejodemedellin.gov.co/es/node/5913?language_content_ entity=es

Council land use

ACI Medellín, 2019. Corredores Verdes, corredores de vida en Medellín [WWW Document]. URL https://www.acimedellin.org/ corredores-verdes-corredores-de-vida-en-medellin/

Alcaldía de Medellín, 2021. Con la siembra de nuevos árboles y jardines mejoran las condiciones ambientales en el centro [WWW Document]. URL https://www.medellin.gov.co/es/sala-de-prensa/ noticias/con-la-siembra-de-nuevos-arboles-y-jardines-mejoranlas-condiciones-ambientales-en-el-centro-2/

Alcaldía de Medellín, 2020. Con muros y corredores verdes, Medellín se convierte en referente mundial en sostenibilidad [WWW Document]. URL https://www.medellin.gov.co/es/sala-deprensa/noticias/con-muros-y-corredores-verdes-medellin-seconvierte-en-referente-mundial-en-sostenibilidad/

Alcaldía de Medellín, no date. Corredores y muros verdes de Medellín [WWW Document]. URL https://www.medellin.gov.co/ es/secretaria-medio-ambiente/medellin-biodiversa/corredores-ymuros-verdes/

González Pantoja, A. (2019) 'Evaluación de la remoción de contaminantes atmosféricos y la captura de carbono por parte de los Cerros Nutibara y Volador de Medellín', Repositorio Institucional Universidad EIA [Preprint]. Available at: https:// repository.eia.edu.co/handle/11190/2479

Los corredores verdes le dan vida a Medellín, 2019. . Centrópolis. URL https://www.centropolismedellin.com/os-corredores-verdesle-dan-vida-medellin/

Santamaría, V., Eduardo, J., 2018. The landscape in the territorial order of Medellin. Revista de la Facultad de Derecho y Ciencias Políticas 48, 587-611. https://doi.org/10.18566/rfdcp.v48n129.a11

Shokry, G. and Anguelovski, I. (2020) 'Bringing nature back to the metropolis for all'. metropolis. Available at: https://www.beta. metropolis.org/sites/default/files/resources/Observatory_Bringingnature-back-metropolis-all_Anguelovski-Shokry.pdf.

Project context/examples

Alcaldía de Medellín, no date. Ecosistemas y Biodiversidad de Medellín [WWW Document]. URL https://www.medellin.gov.co/es/ secretaria-medio-ambiente/medellin-biodiversa/

Alcaldía de Medellín, no date. Territorio Ambiental del Centro de Medellín [WWW Document]. URL https://www.medellin.gov.co/es/ gerencia-del-centro/territorios/ambiental/

Ashden Climate Solutions in Action, 2022. Urban Think Tank: tackling urban heat with green corridors [WWW Document]. URL https://ashden.org/fair-cooling-fund/urban-think-tank/

C40 Cities Climate Leadership Group, 2022. Medellín [WWW Document]. URL https://www.c40.org/cities/medellin/

C40 Knowledge, no date. Cities100: Medellín's interconnected green corridors [WWW Document]. URL https://www. c40knowledgehub.org/s/article/Cities100-Medellin-sinterconnected-green-corridors?language=en_US

Lee Kuan Yew World City Prize, no date. 2016 Prize Laureate – Medellín [WWW Document]. URL https://www. leekuanyewworldcityprize.gov.sg/medellin/

URBAN GreenUP, no date. Medellin [WWW Document]. URL https:// www.urbangreenup.eu/cities/followers/medellin.kl

Vitoria-Gasteiz

Legal/policy measures

Aguado, I., Barrutia, J.M. and Echebarria, C. (2013) 'El anillo verde de Vitoria-Gasteiz. Una práctica exitosa para un planeamiento urbano sostenible', Boletín de la Asociación de Geógrafos Españoles [Preprint], (61). Available at: https://www.academia. edu/26956667/The_green_belt_of_Vitoria_Gasteiz_A_successful_ practice_for_sustainable_urban_planning

Ayuntamiento de Vitoria-Gasteiz (2017) 'Vitoria-Gasteiz The European Green Capital 5 Years Later'.

Council land use

Ayuntamiento de Vitoria-Gasteiz (no dateb) Milestones. Available at: https://www.vitoria-gasteiz.org/wb021/was/contenidoAction.do? idioma=en&uid=u_43a9ea96_12e27c9932e_7faa Ayuntamiento de Vitoria-Gasteiz (no datec) Origin and objectives. Available at: https://www.vitoria-gasteiz.org/wb021/was/ contenidoAction.do?idioma=en&uid=u_43a9ea96_12e27c9932e_7 fb3

Ayuntamiento de Vitoria-Gasteiz (no dated) Route around the Green Belt. Available at: https://www.vitoria-gasteiz.org/wb021/ was/contenidoAction.do?idioma=en&uid=u47b45d0c_1437080f3a 0_7fbc

Cömertler, S. (2017) 'Greens of the European Green Capitals', IOP Conference Series: Materials Science and Engineering, 245, p. 052064. Available at: https://doi.org/10.1088/1757-899X/245/5/052064.

EUROPARC Federation (2022) The Vitoria-Gasteiz Green Belt: actions for the conservation of biodiversity. Available at: https:// www.europarc.org/case-studies/vitoria-gasteiz-green-belt-actionsconservation-biodiversity/

Project context/examples

Ayuntamiento de Vitoria-Gasteiz (no datea) Environmental Studies Centre CEA. Available at: https://www.vitoria-gasteiz.org/wb021/ was/contenidoAction.do?idioma=en&uid=65c21a87_117e9336274_ 7f82

Global Forum on Human Settlements (GFHS) (no date). Available at: https://gfhsforum.org/SCAHSA-2019

Rudden, P.J. et al. (2015) 'Environmental sustainability of European cities', Proceedings of the Institution of Civil Engineers - Civil Engineering, 168(2), pp. 75–80. Available at: https://doi. org/10.1680/cien.14.00037.

Vitoria-Gasteiz City Council (no date) What is CEA. Available at: https://www.vitoria-gasteiz.org/wb021/was/contenidoAction.do?idi oma=en&uid=u3f0887ff_12e22f7d533_7fb1

Project for naturalisation of green spaces and vacant plots in the Lakua district

https://www.vitoria-gasteiz.org/wb021/was/contenidoAction.do?idi oma=en&uid=u25e08f9d_14a56aaea69__7fd8

Rotterdam

Legal/policy measures

Khader, M. (2021) 'Rotterdam Resilience Strategy, Rotterdam', in Urban Planning for Transitions. John Wiley & Sons, Ltd, pp. 1–18. Available at: https://doi.org/10.1002/9781119821670.ch1.

Resilient BoTu (2019) 'Resilient BoTu 2028 Towards the Urban Social Average in 10 Years'.

Willemsen, Eva and Tillie, N. (2018) 'Reconnecting green: Towards a multi-dimensional biophilic city', in IFLA 2018 Conference Proceedings. IFLA, pp. 1130–1138. Available at: https://pure.tudelft. nl/ws/files/51442163/Reconnecting_Green_Willemsen_et_al.2018. pdf.

Syahid, C.N. et al. (2017) 'Sustainable Cities in the Netherlands: Urban Green Spaces Management in Rotterdam', Journal of Indonesian Social Sciences and Humanities, 7(2), p. 157.

Urban Green-Blue Grids for resilient cities (no date) 'Green roofs Rotterdam, The Netherlands'. Available at: https://www. urbangreenbluegrids.com/projects/rotterdam-the-netherlands/

Community consultation/co-creation

Resilient Cities Network (2022) Making Rotterdam's First Resilient Neighborhood through Social Cohesion. Available at: https:// resilientcitiesnetwork.org/urban_resiliences/rotterdam-socialcohesion/

Project context/examples

Frandsen, P.C. (2021) 'Rethinking Rooftops – The culture-driven Transformation of Rooftops in Rotterdam. An investigation of the festival organization Rotterdamse Dakendagen and its role in the transformation of rooftops in Rotterdam'. Available at: https:// theses.ubn.ru.nl/handle/123456789/11285

Gemeente Rotterdam (no date) Multifunctional roofs. Available at: https://www.rotterdam.nl/english/multifunctional-roofs/

Hans Renes (2016) 'Two phases of post-war reconstruction in Rotterdam', Heritage Studies, 21 December. Available at: http:// heritagestudies.nl/?p=181 lonescu, D. (2022) How Rotterdam's Green Rooftops Fight Urban Heat, Planetizen News. Available at: https://www.planetizen.com/ news/2022/06/117373-how-rotterdams-green-rooftops-fight-urbanheat

Post-war reconstruction Community Rotterdam (no date) Post-War Reconstruction. Available at: https://wederopbouwrotterdam.nl/ en/articles/post-war-reconstruction

Puttkamer, L. (2022) What Rotterdam teaches about the power of green roofs, Greenbiz. Available at: https://www.greenbiz.com/article/what-rotterdam-teaches-about-power-green-roofs

de Roode, M. (2021) Compact Nature for Compact Cities: Towards an urban nature network in streets and on buildings that enhances ecological values and well-being, a Rotterdam case study. Masters. Delft University of Technology. Available at: https://repository. tudelft.nl/islandora/object/uuid%3Aef7632ca-6d9d-4de0-a249-5d08bd935164

Rooftop Revolution (2022) Meer groene daken in Nederland!, Rooftop Revolution. Available at: https://www.rooftoprevolution.nl/

Rotterdamse Dakendagen (no date) Join us on the rooftops. Available at: https://rotterdamsedakendagen.nl/?lang=en

Madrid

Legal/policy measures

Andreucci, M.B. et al. (eds) (2021) Rethinking Sustainability Towards a Regenerative Economy. (Future City). Available at: https://link.springer.com/book/10.1007/978-3-030-71819-0

Ayuntamiento de Madrid (2017) Plan Madrid Recupera. Estrategia de Regeneración Urbana. Available at: https://transparencia. madrid.es/portales/transparencia/es/Organizacion/Planesy-memorias/Planes/Plan-Madrid-Recupera-Estrategia-de-Regeneracion-Urbana/?vgnextfmt=default&vgnextoid=251b21a5 4bf68610VgnVCM1000001d4a900aRCRD&vgnextchannel=d86950-8929a56510VgnVCM1000008a4a900aRCRD

Ayuntamiento de Madrid (no date) Estrategia de distritos, Estrategia Urbana. Available at: https://estrategiaurbana.madrid. es/estrategia-de-distritos/ Olazabal, M. and Broto, V.C. (2022) 'Institutionalisation of urban climate adaptation: three municipal experiences in Spain', Buildings and Cities, 3(1), pp. 570–588. Available at: https://doi. org/10.5334/bc.208.

Sánchez, J.R. and Urquiaga, Á.A. (2018) 'The Implementation of the Madrid 2030 Agenda: Policy Alignment in Programmes of Urban Regeneration', in D.B. Hess, T. Tammaru, and M. van Ham (eds) Housing Estates in Europe. Available at: https://link.springer. com/book/10.1007/978-3-319-92813-5

Council land use

esri (2022) 'Plan Madrid Recupera (MAD-RE)', Esri España. Available at: https://blog.esri.es/caso-de-exito/plan-madridrecupera-mad-re/

Community consultation/co-creation

Medina-García, C., de la Fuente, R. and Van den Broeck, P. (2021) 'Exploring the Emergence of Innovative Multi-Actor Collaborations toward a Progressive Urban Regime in Madrid (2015-2019)', Sustainability, 13(1), p. 415. Available at: https://doi.org/10.3390/ su13010415.

Project context/examples

C40 Cities Climate Leadership Group (2018) The Madrid Recupera Plan, C40 Cities. Available at: https://www.c40.org/case-studies/ madrid-recupera/

De Gregorio Hurtado, S. (2021) 'Adaptation to Climate Change as a Key Dimension of Urban Regeneration in Europe: The Cases of Copenhagen, Vienna, and Madrid', in M.B. Andreucci et al. (eds) Rethinking Sustainability Towards a Regenerative Economy. Cham: Springer International Publishing (Future City), pp. 65–89. Available at: https://doi.org/10.1007/978-3-030-71819-0_4.

Hess, D.B., Tammaru, T. and Ham, M. van (eds) (2018) Housing Estates in Europe. Springer (Urban Book Series). Available at: https://link.springer.com/book/10.1007/978-3-319-92813-5

San Francisco

Legal/policy measures

Killebrew, C. (2018) Equitable Improvements to Public Space in the Right-of-Way. Masters. University of Washington. Available at: https://digital.lib.washington.edu:443/researchworks/ handle/1773/42561

McDonald, R. and Beatley, T. (2021) 'Innovative Biophilic Design and Planning: From Rooftop to Neighborhood to City', in R. McDonald and T. Beatley (eds) Biophilic Cities for an Urban Century: Why nature is essential for the success of cities. Cham: Springer International Publishing, pp. 87–108. Available at: https:// doi.org/10.1007/978-3-030-51665-9_6.

Neighborhood Parks Council and San Francisco Parks Trust Join Forces to Create New Parks Support Group (2011) businesswire. Available at: https://www.businesswire.com/news/ home/20111005006595/en/Neighborhood-Parks-Council-and-San-Francisco-Parks-Trust-Join-Forces-to-Create-New-Parks-Support-Group

San Francisco Parks Alliance and San Francisco Public Works (2015) 'San Francisco Street Parks Manual'. Available at: https:// sfpublicworks.org/sites/default/files/4970-SF%20Street%20 Parks%20Manual_Final.pdf.

Council land use

Androulaki, M., Frangedaki, E. and Antoniadis, P. (2020) 'Optimization of public spaces through network potentials of communities', Procedia Manufacturing, 44, pp. 294–301. Available at: https://doi.org/10.1016/j.promfg.2020.02.234.

Beatley, T. (2016) 'San Francisco, California: Biophilic City by the Bay', in T. Beatley (ed.) Handbook of Biophilic City Planning and Design. Washington, DC: Island Press/Center for Resource Economics, pp. 103–118. Available at: https://doi.org/10.5822/978-1-61091-621-9_10.

San Francisco Parks Alliance (2021) 'The Power of Parks 2021 Impact Report'. Available at: https://sanfranciscoparksalliance.org/ wp-content/uploads/2022/04/2021-Impact-Report-Final.pdf.

Community consultation/co-creation

Green Connections San Francisco (2014) 'Green Connections. Community Resource List'. Available at: https://default.sfplanning. $org/Citywide/green_connections/GC_Community-Resource-List-Final_Feb10.pdf.$

Pendola, R. and Gen, S. (2008) 'Does "Main Street" Promote Sense of Community? A Comparison of San Francisco Neighborhoods', Environment and Behavior, 40(4), p. 545.

San Francisco Parks Alliance (2022) 'Our Community Partners', San Francisco Parks Alliance. Available at: https:// sanfranciscoparksalliance.org/our-community-partners/

Project context/examples

Hendrickson, M.K. and Porth, M. (2012) 'Urban Agriculture – Best Practices and Possibilities'. University of Missouri. Available at: https://www.canr.msu.edu/foodsystems/uploads/files/urbanagriculture-best-practices.pdf.

San Francisco Public Works (no date) Street Parks Program. Available at: https://sfpublicworks.org/streetparks

SF Environment (2013) San Francisco Biodiversity Program & Policy. Available at: https://sfenvironment.org/article/the-biodiversityprogram/biodiversity-program-summary

Zhou, D. (2013) A micro-agriculture system in San Francisco's Tenderloin District. Masters. University of Illinois. Available at: https://hdl.handle.net/2142/45437

Research parameters

This study was carried out for Future Parks Accelerator by Morris Hargreaves McIntyre.

It was commissioned in April 2022

Case Studies We chose global cities where their work is replicable to the UK context. This included cities with similar governance models, sizes, or demographics and with both existing historic parks and new urban green spaces to fund and manage. We were especially interested in places that have had to retrofit enhanced greenspace designs into existing towns and cities

Stakeholder interviews Representative of those involved in the greening in initiatives of each case study

Sample source Interviewees contacted after finding contact details during desk research. Snowball sampling was also applied where interviewees and contacts suggested additional people to contact

Date of fieldwork June - September 2022

Reporting method Desk research and interviews have been combined together to develop the six in-depth case studies that are contained within this report. The six mini case studies were reported upon using desk research only

Quotations Quotes included in the report do not include a citation as they were anonymised throughout. However, they are direct quotes taken from the depth interviews undertaken with industry experts and professionals as part of the six in-depth case studies



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We're fascinated by what makes people and organisations tick. Our strategic thinking, insight and creativity transform how our clients see their world.

Our clients use our work to connect more people, more deeply, with their causes, fuelling their success.



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