

SUPPORTED BY
MAYOR OF LONDON



CROSS RIVER
PARTNERSHIP

Healthy Greening in Central London July 2018



There is a clear link between greening a city and improving Londoners' health and wellbeing. Roofs and walls covered in plants, street trees and small pocket parks in between buildings do more than change the look of places. They make the city a better place to live, work and invest. These green features are a vital part of London's Green Infrastructure. They help to clean our air, provide safe and comfortable routes to walk or cycle and space to take a break and recharge.

Addressing London environmental challenges is a priority for the Mayor, Sadiq Khan. His recently published London Environment Strategy outlines the actions he believes need to happen to tackle these challenges, including the action required to improve London's air quality and make London a greener city. This includes creating healthy streets and neighbourhoods for all Londoners to enjoy. A greener London is good for business. It makes staff happy, boosts wellbeing and creates more attractive and vibrant places that people want to visit and spend time.

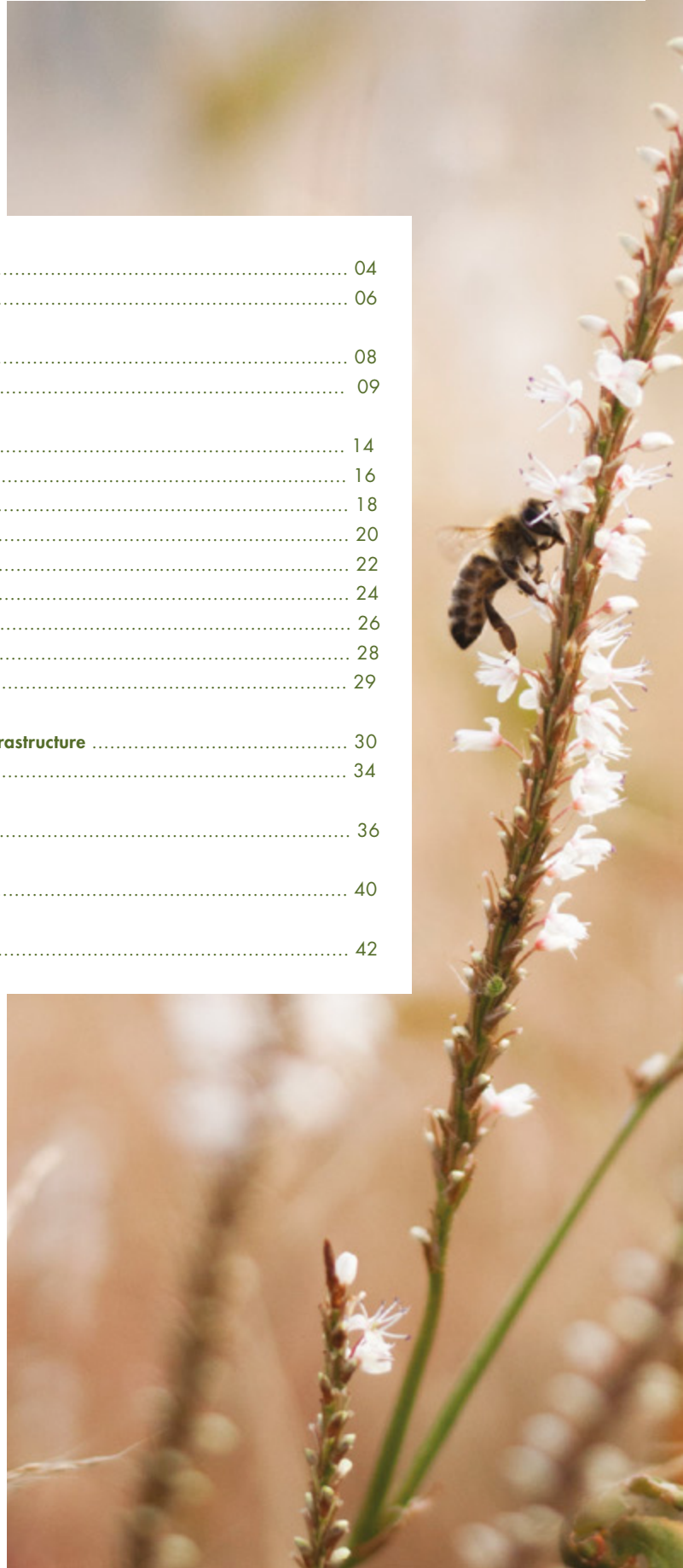
As London gets bigger, we need the city to become even greener. That means ensuring that as London grows this is achieved in a way that benefits everyone. The Mayor wants London to become the world's first National Park City, where more than 50 per cent of the city is green by 2050. To achieve this ambition will need all Londoners to play their part - businesses, charities, local authorities and local communities. Together, we can make London a cleaner, greener city.

I continue to be impressed and inspired by the wealth of ground-breaking and collaborative greening projects happening across our city. As we celebrate the first ever London National Park City week, I hope this new guide, and the case studies in it, will encourage you to be inspired and get involved in greening the grey.

Shirley Rodrigues, Deputy Mayor for Environment

Contents

Context	04
10 Healthy Street Indicators	06
Making the Case for Green Infrastructure	08
Summary of benefits	09
Central London Case Studies	14
Brixton Orchard	16
Brown Hart Gardens	18
Euston Green Link	20
London Wall Place	22
Sky Gardens	24
Fitzpark	26
Granby Place	28
Wellbeing Walk	29
Getting started: A checklist for healthy Green Infrastructure	30
Checklist	34
How you can help	36
Next steps	40
Bibliography	42



Context

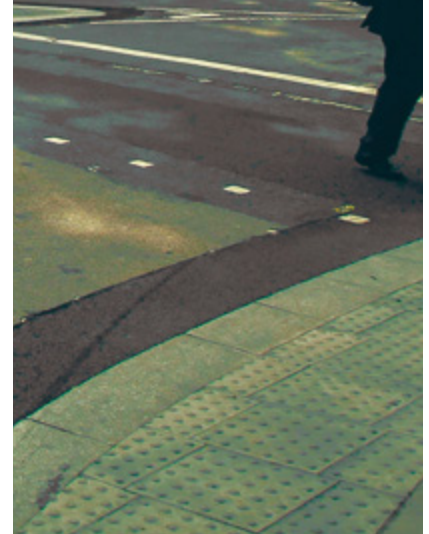


EU, UK and London Policy is striving to create healthy urban environments to stimulate economic growth and improve wellbeing¹. The Mayor of London has recently set out a new policy agenda, with primary policy issues

focussing on both mental and physical health and a number of the Mayor's strategies aim to improve all Londoners' wellbeing, for example:



- The Mayor's Draft Health Inequalities Strategy aims for a society, environment and economy that promotes good mental and physical health for all.
- The Mayor's Transport Strategy is promoting the healthy streets agenda, with ten indicators that promote streets as places for people to enjoy.
- In 2019, London is set to become the world's first National Park City, leading the way in providing a healthy city for all.



To meet these health and wellbeing goals London must create more Green Infrastructure and improve existing Green Infrastructure. Green Infrastructure is green space, greening, and nature including green roofs, wetlands, rain gardens, bioswales, living walls, urban forests and other similar infrastructure. Greening is of value for our health indoors and outdoors.

Business Improvement Districts, Landowners and private sector partners are more important than ever in supporting this change.

**1. Pedestrians from
all walks of life**

10

2. Easy to cross

3. Shade and shelter

**4. Places to
stop and rest**

Healthy

5. Not too noisy

**6. People choose to
walk, cycle and use
public transport**

7. People feel safe

Street

**8. Things to
see and do**

9. People feel relaxed

Indicators

10. Clean air

This document makes the case for Green Infrastructure from the perspective of the benefits it provides to human health.

Green Infrastructure projects often focus on providing environmental benefits such as improving biodiversity. But Green Infrastructure also gives us social and economic² benefits too, and improves our wellbeing. Green Infrastructure contributes to growth, including jobs, health and social welfare, climate change and flooding³.

The recent 'A natural capital account for public green space in London' report found that every £1 spent by local authorities on public green spaces provides a £27 benefit for Londoners⁴.

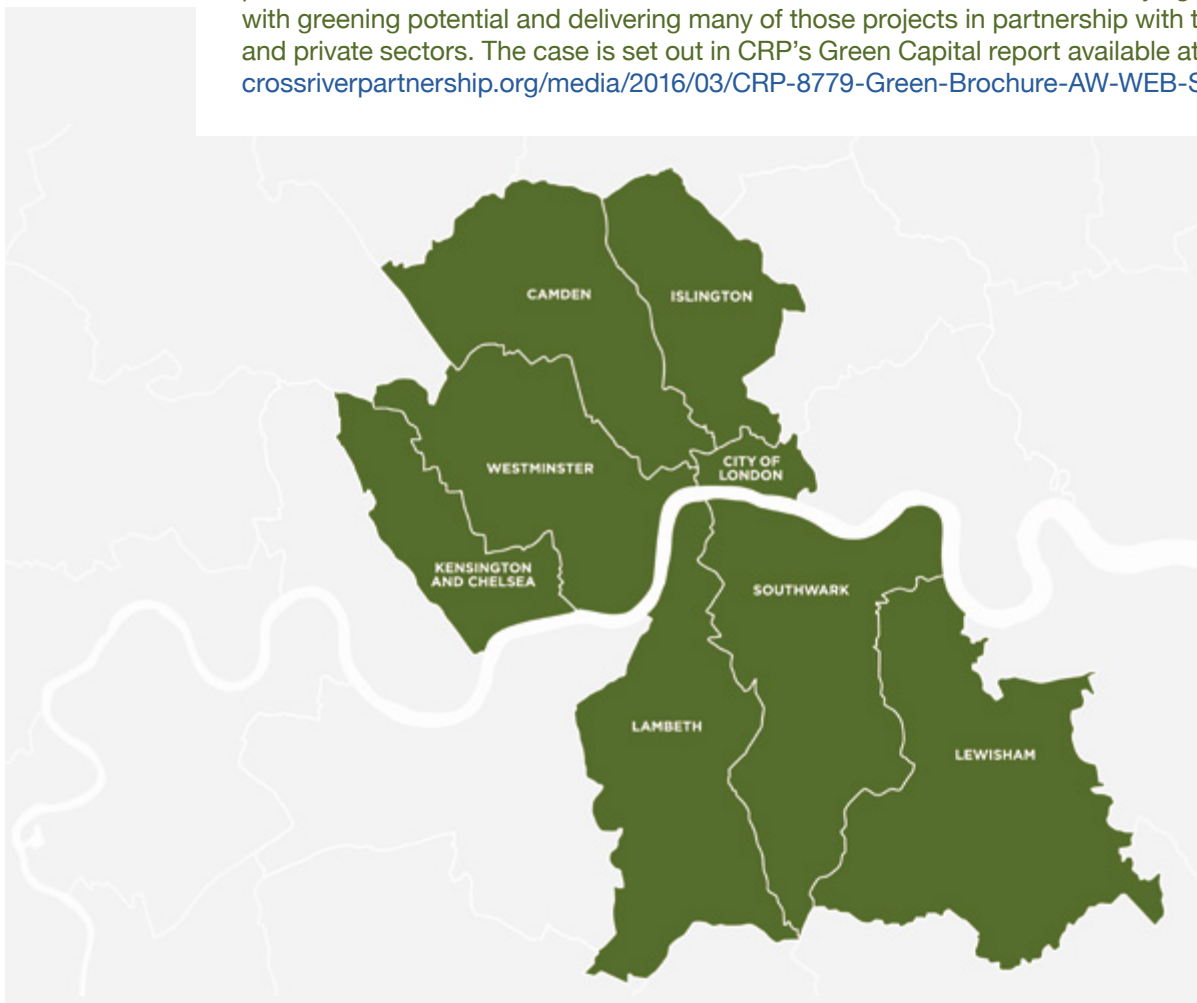
Green Infrastructure will support Health Impact Assessments, referenced in the new London Plan as a way to prove that health has been considered as part of the planning processes. Health Impact Assessments include provisions to improving access to open space, play space, spaces which encourage social interactions, enhancing biodiversity, local food growing, air quality, noise and reducing crime, flood risk and overheating. Green Infrastructure alleviates all these issues.

This Healthy Greening Toolkit demonstrates how Green Infrastructure contributes to healthy places, showcasing great examples within Central London. These projects improve the well-being of Londoners. This toolkit aims stimulate further high quality Green Infrastructure projects to take place.

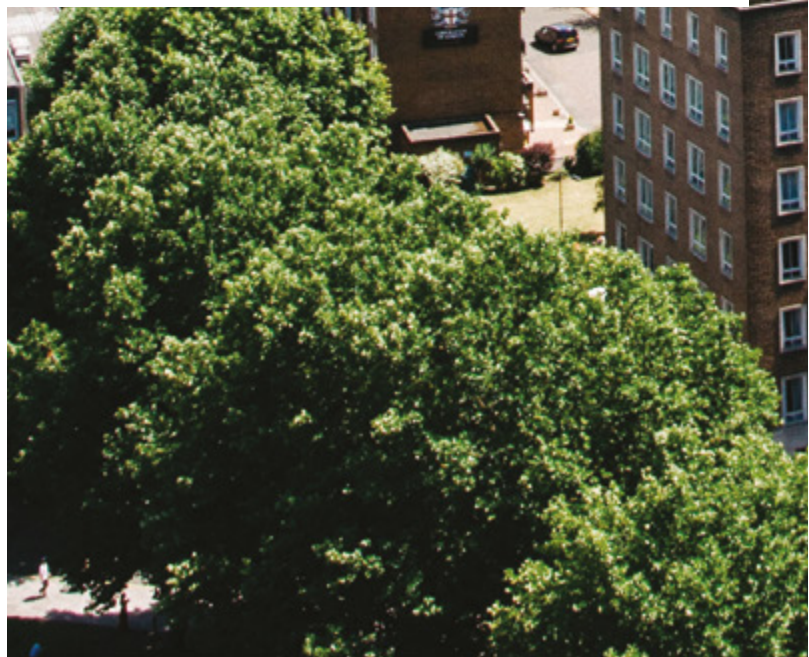
Cross River Partnership is a public-private partnership formed of Central London local authorities and Business Improvement Districts. CRP delivers sustainability, employability and good growth regeneration projects with and on behalf of our partners.

For more information visit www.crossriverpartnership.org.

Cross River Partnership has previously worked with Business Improvement District partners to deliver Green Infrastructure audits across Central London, identifying areas with greening potential and delivering many of those projects in partnership with the public and private sectors. The case is set out in CRP's Green Capital report available at <https://crossriverpartnership.org/media/2016/03/CRP-8779-Green-Brochure-AW-WEB-Spreads.pdf>.



Making the Case for Green Infrastructure



Summary of benefits

of Green Infrastructure

Social



1. Physical health
2. Mental health
3. Community
4. Visual and aesthetic
5. Upskilling

Environmental



1. Temperature reduction and shading
2. Air quality
3. Noise
4. Carbon storage
5. Water flow control and flood mitigation
6. Biodiversity
7. Food production

Economic



1. Avoided public health costs
2. Recreation
3. Property value
4. Value of environmental benefits
5. Increased visitor dwell time
6. Increased productivity, reduced staff turnover, and job creation

All these benefits support a business case to installing and maintaining Green Infrastructure, and designing buildings with nature in mind both inside and out.

Green Infrastructure benefits different stakeholders in many ways. Each sector is represented by an icon below, to demonstrate the many advantages to each stakeholder from increased Green Infrastructure.



**Local Authorities
and Health Services**



Landowners



**Business & Business
Improvement Districts**

Physical Health

Mental wellbeing is improved and levels of physical exercise increase with access to green spaces, which benefits all people and reduces pressure on local

“

In London alone, the avoided public health costs due to green spaces for both physical and mental health are estimated to be £950m per year⁴.

authorities and health services. Those who live within a mile of a park are 4 times more likely to use it compared to people living further away⁵ and residents of neighbourhoods with higher levels of greening have lower Body Mass Index (BMI) due to higher levels of activity encouraged by green and interesting surroundings.

Green spaces are also particularly influential in reducing conditions that contribute to

health inequalities such as obesity, circulatory disease and asthma^{6,7}. Green Infrastructure supports London's vision for Health Streets, providing shade, cooling, and interesting things to look at. In turn, this will encourage active travel and get people moving, fit and healthy. Health benefits of urban green spaces in England have been estimated at £2-3 billion, with the benefits linked to employability and sick leave⁷.

Mental Health

Living closer to green spaces is associated with lower mental health problems⁹ so green space needs to be accessible and scattered throughout the city. Even simply having views of green space for as little as 5 minutes has been found to improve reported mood, self-esteem and concentration and to treat stress and mental health disorders such as depression³. The World Health Organisation has predicted that depression will be the 2nd largest

cause of ill health by 2020⁸. Depression rates are 30% higher in areas with lower access to green space⁹.



Ecotherapy⁸ (using green space to improve mental health) is even being used by the NHS with open gardens to help with recovery¹⁰. Hospitals are working with green charities to use their therapeutic gardens, because patients with clinical depression say that gardening work helped them integrate back into the community and into work^{10,11}. A fantastic example of this is The Brixton Orchard, one of the case studies detailed below. The Brixton Orchard uses an NHS mental recovery health group that tends to the orchard to aid patients' recovery.

It has now been established that Green Infrastructure implementation can save more public health spending compared to clinical interventions^{7,8}. In London alone, it has been estimated that due to public green spaces £370m in mental health costs are avoided each year⁴.

Workplace Wellbeing

People that work indoors need to connect with nature during their day, particularly to reduce stress and encourage creativity. Workers in office with natural elements including greening and sunlight report a 15% high level of wellbeing. This is fantastic for reducing business costs around absenteeism, and improving staff retention rates.

Exposure to green spaces can also improve concentration and benefit business operation and efficiency. Indoor greening also reduces absences by up to 60% and stress by up to 40% and increases performance, productivity and job satisfaction by 10%^{12,13}.

Community

83% more people engage in social activity in green spaces compared to concreted areas^{6,14}. Green Infrastructure increases social capital by providing a place to socialise⁵ and interact with neighbours, bringing social cohesion to spaces that can be

disjointed. Green Infrastructure has been found to increase the likelihood of informal interactions and help to promote a sense of community spirit⁷. It has also been found to reduce aggression or aggressive emotions¹⁴, with some studies even suggesting that the presence of Green Infrastructure reduced crime^{15,7}.

The positive impact of recreational activities in London's public green spaces is estimated to be £926m per year⁴. People are willing to pay for recreational activities taken in a park. This factor is great to get people out and about, speaking to others in their community and participating in activities.

Green spaces also improve cognitive development of primary school children¹⁵ and reduce the effects of ADHD in children when they have green spaces in which to play⁶.

Green Infrastructure improves the biodiversity of an urban environment and assists in providing a healthy ecosystem. These spaces provide an area where wildlife can thrive and people can enjoy and learn about it close to their home. Community gardens provide sustainable food production in our urban environments and provide significant social and community benefits. Businesses are also beginning to create office gardens in order to improve staff integration and provide a place to relax and engage with the outdoors while at work.

“

The Sacramento Municipal Utility District Call Centre spent \$1000 per employee rearranging employees' workstations to allow access to natural views. The annual productivity savings averaged \$2,990 per employee.¹⁶



Aesthetic Improvements to Encourage Active Travel

People that work indoors need to connect with nature during their day, and their lunchbreak and commute can be a great opportunity to do that¹⁷.

For example, Hamburg has created a city-wide Green Infrastructure network, which has made walking and cycling easier and more pleasant transport choices.

Providing access to green spaces such as work gardens improves staff wellbeing and productivity and a third of officer workers say that the design of an office would affect their decision to work at a company¹⁸.

“

For central London businesses, greening is key to attracting and retaining the best talent. Google's new office in Kings Cross is planned to have a 300m garden roof¹⁹.



Upskilling and Training



Greening and Green Infrastructure provides new jobs, in a new sector, for those who create and maintain Green Infrastructure. Looking after gardens has been used as a pathway for mental health patients to get back to full time employment. Many charities, such as Thrive, and Groundwork London, support this transition, and it's a great way to ensure that London's Green Infrastructure is cared for.

Gardening and working outdoors is a growing industry in cities, and can be a great gateway into the world of work. New gardeners tending to Green Infrastructure in urban areas discuss learning new skills as being a significant benefit¹⁰.

Climate Change Mitigation and Adaption

Numerous tonnes of CO₂ are absorbed over the lifetime of Green Infrastructure, reducing the effects of climate change. London's public parks store 5.4 million tonnes of carbon⁴. Green Infrastructure also helps reduce flooding by soaking up and storing rainwater.

Reduced flooding means reduced insurance cost for individuals and businesses, and will help London adapt to predicted increase in rainfall and other impacts of climate change.

Urban areas can be up to 5°C higher than the surrounding rural areas with buildings being expensive and energy intensive to cool.

“

The value of public parks in London has been measured at £18m per year for carbon storage and an estimated £594m benefit in temperature regulation⁴.

Green Infrastructure reduces this effect due to increased evapo-transpiration and shading of urban surfaces². Over-heating in urban areas also impacts on public health, in particular during extreme heat events and summer droughts. Vegetation around buildings can reduce temperatures by 2°C.

Air Quality

Green Infrastructure has been increasingly found to assist with the reduction in air pollution. Especially when Green Infrastructure acts as a barrier to air pollution dispersion and aid deposition of pollution from the atmosphere²⁰. London's i-Tree survey

“

A typical 4-year old tree will provide an annual benefit of \$171 (£126) per tree from energy savings, air pollution reduction and stormwater management².

valued the benefits that trees provide including removal of 2241t of pollution per annum worth £126.1 Million²¹. Where Green Infrastructure is incorporated with sustainable urban drainage systems adjacent to streets, it facilitates the removal of particulate matter caused by brake and tyre wear left on the carriageway.

Green Infrastructure can be linked with cleaner air walking routes in cities. Cross

River Partnership's Clean Air Route Finder helps to identify cleaner walking and cycling routes, and has encouraged stakeholders in London to develop cleaner routes with greening and wayfinding.

(www.cleanairroutes.london)

Noise

Cities are intrinsically noisy places, thriving with people, traffic and business. This noise can increase stress levels, and reduce tranquil space for people to rest and enjoy.

Green Infrastructure can improve noise abatement in busy cities with trees and plants absorbing and scattering noise from the surrounding environment^{7,20}.

In an increasingly busy city, this mitigation can help create calming, restful spaces for individuals and businesses.



Central London Case Studies





Many CRP partners and Central London stakeholders have delivered projects, or are planning them. Here CRP showcases some examples from across Central London, how they were implemented and what benefits these projects have brought to their local area.

Brixton Orchard

by Brixton BID
London Borough of Lambeth

Key benefits

- Delivered adjacent to the A23, a busy, heavily polluting trunk road; providing rest space and cleaner air for those walking, and living, near to the road.
- Increased community engagement and awareness on air quality and urban greening through a collaborative, coordinated delivery programme.
- Increased skills and employability of local residents through partnership with Urban Growth.



Brixton Orchard project planted 35 fruit trees in Brixton Hill.

The project brought together the community and aimed to raise awareness of air quality issues in Brixton and the role of the urban forest in cleaning London's air. The site was chosen adjacent to one of the most polluting roads in London, the A23.

The trees planted were a variety of apples, cherries, damsons, plums, quince, mulberry and pears.



SUPPORTED BY
MAYOR OF LONDON





Despite initially being primarily an air quality project, there have also been other multiple benefits through the development of the orchard. The orchard has been great at bringing the community together by having multiple volunteering days, primary school visits, corporate visits and even involvement from an NHS mental health recovery group. Studies have shown that gardening can save more for public health services compared to typical clinical interventions.

The site has multiple uses, with it being a tranquil site to meditate and a peaceful area away from the town centre. One local in particular had suggested that the orchard had a positive impact on their recovery and empowered them to volunteer at a local café in the area.

The social enterprise Urban Growth is tasked with maintaining the space and were involved in the initial design and implementation of the project. The enterprise is involved in improving the wellbeing of Londoners through education, providing horticulture skills to those out of work and improving access to the local environment.

You can also join in and volunteer at the Brixton Orchard, which can be a great place to de-stress, unwind and relax while giving back to the local environment.

Brown Hart Gardens

Living Wall and Parklets - Wild West End by Grosvenor
City of Westminster

Key benefits

- The parklets and wall have focused on greening the grey, setting up an urban eco-system for bees.
- Educational aids have been developed for Grosvenor's garden apprentices.
- Linked green space has kick-started the development of green corridors, providing people with greener walking routes through the city.



Photo by James Wood



ARUP



Grosvenor's 20-year Vision for Mayfair and Belgravia, A Greener Grosvenor, outlines their overall strategy to manage and enhance their green estate to provide a range of benefits. By promoting green space and features such as Brown Hart Gardens and Parklets we can provide benefits including; healthy living, enhanced character, flood mitigation, improved air quality, increased biodiversity and climate change resilience.

Brown Hart Gardens is an elevated public square, which has been built over a substation. Trees and plants have been planted at the perimeter in special planters that are also power units and contain lights to illuminate the deck. The planters and seats can be moved around into a variety of configurations allowing flexible planting schemes to add interest to the gardens

through the seasons. The garden won Best Small Park of the Year award in 2017 in conjunction with London in Bloom. The space is used to host markets, movie screenings, is a lunch space and a social area.

The purpose of the Elizabeth Street and Pimlico Road pocket-garden oases, the size of three parking spaces, are to support plans for more sustainable cities.



In London alone, the avoided public health costs due to green spaces for both physical and mental health are estimated to be £950m per year¹⁰.



Arup and Grosvenor installed a temporary 'living wall' on the Grade I St Mark's building, which has the potential to reduce air pollution by up to 20%. The wall, named 'Living Wall Lite', spans 80m² and comprises a mixture of grasses, flowers and strawberries, reducing the visual impact of scaffolding on local residents. As well as improving air quality, studies have also shown that living walls have been found to reduce noise pollution by up to 10 decibels.

Euston Green Link

By Euston Town BID
London Borough of Camden

Key benefits

- Raising awareness with local residents, workforce and visitors of local air quality.
- Enlivening a route, away from the main road, which will reduce exposure to poor air quality for those who use it.
- Bringing increased numbers of visitors and trade to small businesses on Drummond Street.



SUPPORTED BY
MAYOR OF LONDON

**EUSTON
TOWN**

 **Camden**

Euston's Green Link will provide a connection between Regents Park and Euston Station. By encouraging people to use a greener walking route away from traffic, with lower air pollution, it reduces individuals' exposure to dangerous air pollution. The project will also encourage the use of Regents Park and attract footfall to Drummond Street, the main destination along the route.

As well as realising air quality benefits, the project aims to help support independent traders who have suffered the effects of HS2 construction and plans.

Positive outcomes will include raising awareness of air quality, behaviour change, Londoners enjoying green space away from construction, connections between business and residents, uplift of the local economy, aesthetic improvements to the street.

Delivered by Euston Town Business Improvement District, with funding from the Mayor's Air Quality Fund.



London Wall Place

City of London Corporation

Key benefits

- Increased local biodiversity, and people's awareness of the ecological history of the area.
- Reduced road noise, and associated stress caused by noise.
- Increased awareness of local businesses on the topic of Green Infrastructure and how it positively impacts upon productivity.



Photos by ANS Global



ansglobal



ANS Global has recently completed a 740sqm living wall at London Wall Place, Barbican, City of London. The purpose of this was to create a vertical living wall to provide air purification, increase biodiversity in the area, and create a natural environment to enhance wellbeing.

ANS Global carried out an analysis of local plant species that grew in the vicinity of the original London Wall and have incorporated some of these species into the living wall. The outcome of this project is to provide biodiversity and air purification, along with absorbing the sound of traffic from

the busy surrounding roads. The living wall along the high walk also provides a green and clean pedestrian route.

A relaxing and calming environment as well as improving the overall feel of the area, as highlighted by positive feedback received.

Installing such a large expanse of living wall in the public realm certainly generated awareness of the improved wellbeing and increased productivity that directly results from Green Infrastructure and biophilic design.

Sky Gardens

Wild West End by The Crown Estate
City of Westminster

Key benefits

- Staff Engagement in Green Infrastructure and growing your own food.
- Mental health benefits of relaxing and communicating with colleagues, outside the office environment.



The Crown Estate set up an allotment on a rooftop on Regent Street to encourage occupiers to take up 'growing their own food' regardless of experience or age. Ten Regent Street businesses with a total of 30 volunteer gardeners are actively involved in the Allotment Club – now in its second year.

There are 16 table top allotments and one large communal herb table.



Bumper crops of herbs, salads, fruits and vegetables have been grown and enjoyed – fennel, parsley, tarragon, mint, oregano, basil, thyme, chives, sage, lemon verbena, lavender, curry plant, borage, lettuce, rocket, onions, radishes, beetroot, round carrots, strawberries galore and many kilos and varieties of tomatoes.

The secret allotment garden provides participating Crown Estate occupiers with the chance to enjoy nature and gardening during their working day and demonstrates how easy it is to grow your own food and by doing so also benefit wildlife. Through the season the gardeners see an increase in pollinators,

such as honey bees, bumble bees, ladybirds, butterflies and small birds such as pied wagtails.

The gardeners gain huge satisfaction from growing their own food and sharing their harvest with friends and colleagues as lunchtime treats. As well as learning a new skill, their time at the allotment is for relaxation and contemplation to prepare themselves for a busy day ahead or as a restorative and re-energising time at the end of a hectic day. The gardeners describe the allotments as a haven where they recharge their batteries, planting, weeding and watering crops in the peace and calm up on the rooftops.

Fitzpark

by The Fitzrovia Partnership
London Borough of Camden

Key benefits

- Reuse of space outside businesses that are now more visible to increased footfall along the street.
- 41% increase in self-reported wellbeing.
- 22% increase in people that spend more than 15 minutes on Windmill street.
- Improved look and feel of the local environment with 100% of local businesses supporting the scheme.
- Improved walkability of a quieter street in busy Fitzrovia, improving physical health.



Fitzpark is the transformation of a loading bay on an urban street into a temporary green seating area, or parklet, for local residents, businesses and visitors to enjoy. It is a simple-to-install modular design of nine planters and benches arranged on a temporary decking base.



SUPPORTED BY
MAYOR OF LONDON

**The
Fitzrovia
Partnership**
Business Improvement District



ARUP



The key objectives for the parklet are to enhance walkability and promote health and well-being for local residents, workers and visitors, foster community interaction and economic benefits for residents and local businesses, provide climate change adaptation and increased biodiversity to improve city resilience, and improve the look and feel of the local environment.

The installation of Fitzpark has also resulted in a 41% increase in self-reported wellbeing, and 22% increase in people that spend more than 15 minutes on Windmill Street.

Most important is raised awareness of the role of the Green Infrastructure in improving the mental and physical wellbeing of the people that live and use the space.

The Fitzrovia Partnership involved local businesses in the project from the very beginning with activities like local seminars, surveys and site visits showing good practice. A monitoring process was undertaken before and after the project which was important to seek opinion and feedback and to provide valuable lessons learnt.

The parklet is maintained by the BID (The Fitzrovia Partnership). Arup helps with the planting if anything needs to be replaced and Planteria water the plants once/twice a week during warm season.

Granby Place

by We Are Waterloo BID
London Borough of Lambeth

Key benefits

- Improved space for local workforce to spend lunchtime, tranquil, green and away from busy roads, a factor that increases stress.
- A new space for hosting events and activities, opening up further economic opportunity for the local businesses.
- Better market facilities for the traders at Lower Marsh Market who benefit from more customers coming to eat at the market.



Granby Place was created to provide a green space for wellbeing activities in Waterloo. With the difficulty in finding quiet and tranquil spaces in Central London, WeAreWaterloo BID set to address this problem by creating an area surrounded by plants in Granby Place at Lower Marsh Market. The space currently has events including Radio 4 and podcast lunches, wellbeing workshops which also include greening masterclasses, and evening talks.



SUPPORTED BY
MAYOR OF LONDON



Wellbeing Walk

Urban Partners
London Borough of Camden

Key benefits

- 50-60% less exposure to poor air quality along a new, enlivened route.
- Helped to point people in the direction of green space, encouraging new experiences between individuals and nature.

The Wellbeing Walk is an alternative walking route that encourages people to avoid the high level of pollution on Euston Road when walking between King's Cross / St Pancras International Station and Euston Station. Since CRP and Urban Partners launched this route in 2015, there has been a threefold increase in the number of people taking this path.

As London's first designated station to station walking route, the Wellbeing Walk provides people with a less polluted, less congested and more pleasant walking route between the major stations on the Euston Road. The route, which was shortlisted for an excellence in cycling and walking award at the London Transport Awards in 2016, is between 50%-60% less polluted than the Euston Road. The route follows tree-lined Phoenix Road and Brill Place alongside a park, and a shared green space by a housing estate.

This first wellbeing walk led to the development of the Clean Air Route Finder by Cross River Partnership. Through the tool, individuals can find a less polluted route. The tool is enabling Cross River Partnership's partners to develop further routes with signposting and greenery.



“

“At Google we are keen to find opportunities to help improve the local community – it’s important not just for the people who live here but our employees directly benefit too. The Wellbeing Walk is a great example of this and we are pleased to be supporting it through Urban Partners”

Joe Borrett, Google's Director of Real Estate & Construction (EMEA & India).



SUPPORTED BY
MAYOR OF LONDON





**Getting
started:**

**A
checklist**

**for
healthy**

**Green
Infrastructure**



Many organisations can be involved in creating and improving Green Infrastructure, with different roles for everyone. This checklist brings together learning and experience from previous projects delivered by CRP and partners, including the case studies listed above. It is also useful with other organisations in the local area to maximise the benefits and use of green spaces.

Local Authorities can



- Develop Local Plans at a borough and / or neighbourhood level that identify, support and direct greening alongside, and as an integral part of, other infrastructure considerations such as housing, energy and transport, and encourage multi-functional Green Infrastructure innovations in all developments and public realm schemes.
- Work with landowners and developers to increase greening.
- Green their buildings and road network, with proven cost savings on recreation, wellbeing, increased active travel, and sustainable urban drainage.
- Run internal training sessions to raise awareness of the many and varied environmental, health and economic benefits that can be delivered by Green Infrastructure.
- Support residents' gardening groups to identify and convert unloved spaces into micro-gardens and provide ongoing maintenance.

Business Improvement Districts can



- Identify areas for greening which support business in their district, and increase visitor numbers / dwell time / spend levels as part of an overall enhancement to the neighbourhood.
- Engage member businesses to support and sponsor local greening initiatives and install their own outside and within their buildings.

Landowners can



- Support local authority planning policy, and design greening into new / retrofit developments.
- Work with tenants and customers, communicating the great financial and health / well being benefits, to encourage development of indoor/outdoor greening.
- Work with buildings managers and facilities managers to be pro-active about maximising the ongoing potential of indoor and outdoor greening through maintenance agreements.

Businesses can

- Green inside and outside offices, shops, restaurants and other buildings to improve staff wellbeing and productivity, as well as attract new customers, and generate increased dwell time / spend by them.
- Support staff to curate and manage greening at their workplace.
- Projects can be large or small so SMEs can deliver fantastic greening projects too.



Residents and Community Groups can



- Identify underused and unloved space in the neighbourhood, and speak to the Local Authority about its ownership and potential for greening.
- Set up gardening groups that can be called upon to maintain local green space. This will help social cohesion, bringing the community together and getting people active.
- Use gardening / mini allotments as a learning tool for children and young people, encouraging healthy and active living and eating from an early age.
- Use gardening as a way to encourage people out of their homes and off their computer screens, to do something positive and to make new friends in their neighbourhood.
- Consider crowdfunding as a potential source of funding for identified projects.

Checklist



Read Cross River Partnership's Green Capitals Report for a 'how to' guide to delivering Green Infrastructure in your area:
<https://crossriverpartnership.org/media/2016/03/CRP-8779-Green-Brochure-AW-WEB-Spreads.pdf>

1 Idea

- **Make it accessible**
Make your greening visible, open to all and safe to access.
- **Be creative**
Engage all the senses. Is there a message that your greening has? For example, it could be to communicate about local air quality; promote relaxation; or encourage activity.
- **Don't forget that water can be included**
Don't exclude blue! Water significantly improves mental health too, and can provide a different aesthetic to a project.
- **Size Doesn't Matter**
Find any space to green. With lots of smaller interventions, London can still become a National Park City; threading greenery throughout our spaces.
- **Use this toolkit**
Use information, source references and data from this document to help build a business case for projects.

2 Funding

- Identify a range of funding sources. For example, a blend of public and private sector funding might be required, with appropriate use of Planning Gain Section 106 contributions and Community Infrastructure Levy (CIL).
- If a green space delivers different agendas (e.g. air quality, employability, active travel facilitation) a wider variety of funding streams may be available to it.
- Seek funding or sponsorship from local landowners and businesses.

3 Practicalities

- **Consider**
How can drainage be maximised through your intervention? Is there a sustainable urban drainage system that can support your project?
- **Keep it real**
The health benefits of Green Infrastructure are from interacting with living, breathing plants. Plastic plants don't have the same impact as real greening.
- **Consider maintenance**
There are lots of easy to maintain plants, and you could work with local schools, businesses or other organisations to develop a weeding / watering / cleaning rota for.

4 Communications

- Tell people about it! If your project is near, or on, a main thoroughfare, can you signpost people to it? Green Infrastructure can also be used to signpost people to your intervention.
- Are there local residents or schools that could benefit from visiting a nearby green space?
- Have you tried using social media?

5 Monitoring

- Are there indicators that will show the benefits that your green space has achieved?
- Indicators can include increased visitor numbers or dwell time; staff perception improvements; measures of health, well being, absenteeism, productivity, staff turnover; or occupancy rates.

How you can help





Make the Case

Organisations that create and improve Green Infrastructure can develop a transferrable business case for future greening projects by identifying the 'human' and health benefits of Green Infrastructure over and above the sustainability benefits. This will assist other Green Infrastructure projects get off the ground.



Include community groups

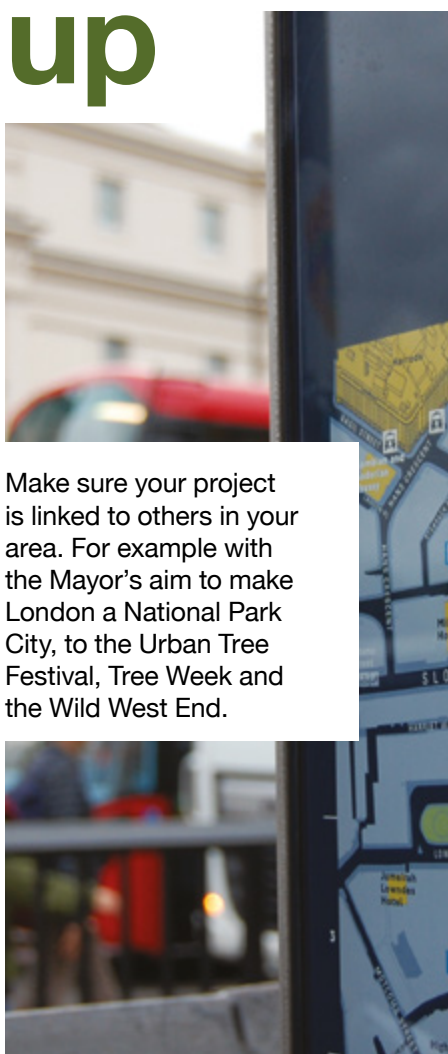


Green Infrastructure can aid recovery and even reintegrate people back into working environments. Make sure these benefits are highlighted and exploited when creating green space. Think about inviting your local NHS group, and signpost from hospitals to your new or improved green space. Communities that will benefit from and use your greening should be included at all stages through creating, developing and maintaining green space.

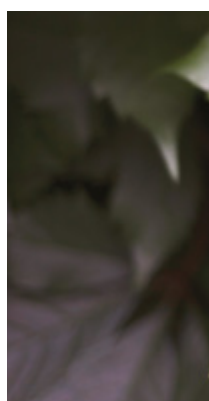
Be creative about maintenance

It is of benefit to organisations that are responsible for green space, and those that could be engaged in the maintenance of green space, to make connections. Use social enterprises/green charities to maintain your green spaces to provide another means for green spaces to engage with the community and provide significant social benefits. Groups that could support are listed below.

Link up



Make sure your project is linked to others in your area. For example with the Mayor's aim to make London a National Park City, to the Urban Tree Festival, Tree Week and the Wild West End.



Communicate successes to all



Disseminate benefits to the local community and businesses (for example via social media), your local authority and your wider network. Further awareness will encourage more funding for Green Infrastructure projects, particularly when the benefits for people and wellbeing are emphasised.

Next steps



Although London is taking great strides in implementing Green Infrastructure, and becoming a National Park City, there is still plenty of work to do. Cross River Partnership is keen to work with as many different stakeholders as possible to effect the largest change and impact.

1 London public and private sector organisations should continue to develop the **evidence base** and help communicate how improved health, well being, productivity and other social benefits can be effectively disseminated to businesses.

2 Local Authorities should use **development plans** to encourage and enforce greening to be increased (especially with Health Impact Assessments), particularly in places where they tie into air quality goals. This will support urban greening requirements in the new London Plan.

3 **Funding** is still a large barrier to creating and maintaining green space. To reduce the ongoing funding burden new partnerships should be identified and developed to ensure that these spaces are self-sustaining/maintaining, with as little ongoing call on the public sector purse as possible. Business Improvement Districts are already leading the way in this space, and should continue to be encouraged as far as is possible.

4 **Partnerships** should improve links between businesses and greening/skills charities such as Grounded Ecotherapy (Grounded Project) who currently maintain Queen Elizabeth's Roof Garden (Southbank Centre). By developing an understanding of what these social enterprises/ green charities require and the ideas they have to increase the uptake of Green Infrastructure, real, up-scaled benefits could be realised.

5 Undertake **research and support** on what not-for-profits need to provide Green Infrastructure services. Support offered could include: potential funding sources / how to access them; partnership brokering / introductions; innovative approaches to maintenance resourcing; how to scale up.

6 Health Services should determine more closely the largely untapped potential for **green, or social, prescribing**. Green Infrastructure installation and maintenance works be undertaken as part of, or alongside, more traditional medicine prescribing, to prevent low level anxiety / loneliness problems developing into more serious mental health issues.

Further information

If you would like further information about anything that has been included in this document, please get in touch: crp@crossriverpartnership.org

Potential partners, support advice and further links:

- www.crossriverpartnership.org
- www.thrive.org.uk/
- www.groundwork.org.uk/
- www.groundwork.org.uk/Sites/london/pages/skills-development
- www.treesforcities.org/
- www.mungos.org/
- <http://groundedproject.org/>
- <http://urbangrowth.london/>
- <https://crossriverpartnership.org/projects/recruit-london/>
- www.london.gov.uk/what-we-do/environment/parks-green-spaces-and-biodiversity/green-infrastructure
- <http://publications.naturalengland.org.uk/publication/6686618761297920>

Bibliography



1. London Environment Strategy, Greater London Authority, 2018
<https://www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/draft-london-environment-strategy>
2. Assessing the Economic Value of Green Infrastructure: Literature Review, Victoria Institute of Strategic Economic Studies, 2015
<https://www.vu.edu.au/sites/default/files/csces/pdfs/green-infrastructure-lit-review-visescwp23.pdf>
3. Urban Green Infrastructure, Jonathan Wentworth, 2013
<http://researchbriefings.parliament.uk/ResearchBriefing/Summary/POST-PN-448>
4. A natural capital account for public green space in London, Greater London Authority, 2017
https://www.london.gov.uk/sites/default/files/nca_supplementary_document.pdf
5. The health benefits of urban green spaces: a review of the evidence, ACK Lee & R Maheswaran, 2011
<https://academic.oup.com/jpubhealth/article/33/2/212/1585136>
6. Examining the benefits of green infrastructure (Forest Research), Forestry Commission, 2004
7. Green infrastructure and public health, European Commission, 2015
http://ec.europa.eu/environment/nature/ecosystems/pdf/Green%20Infrastructure/GI_health.pdf
8. Wellbeing by Design from Green Infrastructure, Westley Design Ltd & University of Plymouth, 2017
<https://www.charteredforesters.org/wp-content/uploads/2017/04/Westley-Michael-Planning-and-Integration-for-Multiple-Benefits-Practice.pdf>
9. Urban green infrastructure and human wellbeing, Natural Capital Initiative, 2017
<http://www.naturalcapitalinitiative.org.uk/urban-green-infrastructure-and-human-wellbeing/>
10. Can Gardening Save the NHS?, Gardeners' World, 2016
<https://www.pressreader.com/uk/gardeners-world/20161228/281560880441903>
11. How Hospital Gardens Help Patients Heal, Scientific American, 2012
<https://www.scientificamerican.com/article/nature-that-nurtures/>
12. Benefits of Indoor Planting, University of Technology Sydney, 2014
https://www.uts.edu.au/sites/default/files/indoor_plant_brochure_2014.pdf
13. The Relative Benefits of Green Versus Lean Office Space: Three Field Experiments, Journal of Experimental Psychology, 2014
https://www.researchgate.net/publication/264395358_The_Relative_Benefits_of_Green_Versus_Lean_Office_Space_Three_Field_Experiments
14. Green Infrastructure, Ecosystem Services, and Human Health, International Journal of Environmental Research and Public Health, 2015
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4555311/>
15. Health benefits of urban vegetation and green space: Research roundup, Journalists Resource, 2015
<https://journalistsresource.org/studies/environment/cities/health-benefits-urban-green-space-research-roundup>
16. Biophilia and workspace design, Work Design Magazine, 2012
<https://workdesign.com/2012/07/biophilia-and-workspace-design/>
17. Masterplan and Strategy for a Green Active Travel Network at City Scale, Hamburg Green Network <http://www.centralscotlandgreennetwork.org/resources/publications/category/116-grren-active-travel-route-case-studies?download=409:green-active-travel-grunes-netz-hamburg>
18. Human Spaces: Biophilic Design in the Workplace, Interface
http://www.interface.com/EU/en-GB/campaign/positive-spaces/human-spaces-report-en_GB
19. Green buildings: face of the future or eco-fantasy? The Daily Telegraph Saturday 16 December 2017
20. Air pollution abatement performances of green infrastructure in open road and built-up street canyon environments - A review, Atmospheric Environment, 2017
<http://www.sciencedirect.com/science/article/pii/S1352231017303151>
21. London's pollution-busting trees valued at £6.1 billion in new survey, Greater London Authority, 2015
<https://www.london.gov.uk/press-releases/mayoral/londons-pollution-busting-trees-valued-at-61bn>



CROSS RIVER
PARTNERSHIP

Web: crossriverpartnership.org

Twitter: [@CrossRiverPship](https://twitter.com/CrossRiverPship)

Tel: 020 7641 2198

Email: crp@crossriverpartnership.org