# Global Streetscape Responses to COVID-19

Developments in streetscape design to facilitate cycling, walking, and social distancing.

February 2022

**CROSS RIVER PARTNERSHIP**
HEALTHY STREETS EVERYDAY

SUPPORTED BY

**MAYOR OF LONDON**

Department
for Environment
Food & Rural Affairs

# Contents

# 01 Executive Summary

The COVID-19 pandemic has caused abrupt changes to people's lifestyles, creating a renewed focus on our streets and how we move around our cities.

This guidance document by Cross River Partnership (CRP) aims to explore the responses of seven cities around the world: London, New York, Nairobi, Bogotá, Seoul, Melbourne, and Brussels. We look at the different schemes implemented, including outcomes, challenges, funding, and future strategies of each city. We hope that this will inspire local authorities, business improvement districts, and private sector organisations to deliver initiatives that support ongoing change to make cities healthier, greener, safer, livelier, and more pleasant.

This document summarises these responses with five key learnings:

## 1. Push the Boundaries
Be progressive and ambitious. Seoul has shown us the opportunity to utilise technology, data, and "futuristic" concepts, such as delivery robots, to find innovative solutions to complex problems. Additionally, COVID-19 has shown that rapid and ambitious transformations of cities, such as Brussels, are possible.

## 2. Strategy & Funding
Focus streetscape initiatives on existing strategies and funding sources, as Bogota did, however, be open to considering the need for alternative funding models and plans. Public-private partnerships, such as in New York City, could be useful to support local businesses and create long-term sustainable change.

## 3. Evidence-Based Approach
Brussels' example highlights how decisions surrounding the implementation and management of streetscape interventions should be based on clear quantitative and qualitative data, such as monitoring data and surveys. Without this evidence, impacts can be hard to prove, hindering the move towards permanent change, as seen in Melbourne.

## 4. Raising Awareness for Safety
Road safety is crucial to many of the projects discussed in this guidance document. Educational and engagement programmes can be essential to address unwanted behaviours, such as those experienced in Nairobi. Anticipating misuse and addressing potential hazards with safety in mind could help to prevent traffic collision incidents and inconsiderate road-user behaviour from occurring.

## 5. Collaborate for Healthy Streets
The street is at the heart of issues around economic, social, environmental, and public health challenges. Encouraging collaboration can lead to more innovation, efficient processes, increased success, and improved communication between all stakeholders.

## COVID-19 and Streetspace Interventions

COVID-19 has changed our streets. Villages, towns, cities and countries locked down in early 2020 to reduce personal contact and viral transmission. As a result, cities worldwide emptied and became a barren image where little life or activity took place. Consequently, vast amounts of money were directed towards projects that enabled essential services to function. Public transport often continued to run, but those that could work from home were ordered to do so, and leisure and social activities were prohibited. At the end of April 2020, public transport ridership decreased drastically in London, while walking and cycling boomed [1, 2].

Summer 2020 brought slightly more normality back to many cities, including London, as COVID cases dropped enough to lift some restrictions. Nevertheless, people continued to stay away from indoor activities, and the public began spending more time outside [3]. Funds and policies were introduced to enable this shift. In London, the Transport for London (TfL) *Streetspace* fund and the UK's Department for Transport's (DfT) active travel grants helped to encourage walking and cycling locally and nationwide [4, 5]. Similarly, measures to encourage social distancing and provide more space for people and businesses to operate were prioritised [6]. As a result, the UK and London witnessed a renewed focus on sustainable, active travel within local and central governments. However, this shift in attitude was not unique. Across the globe, cities responded to the pandemic through streetscape

**Introduction**

schemes that focussed on walking, cycling, outdoor dining and pedestrian-priority areas to support economic recovery. This guidance document aims to explore the streetscape responses of seven cities from around the world:

- London, United Kingdom
- New York, USA
- Nairobi, Kenya
- Bogotá, Colombia
- Seoul, South Korea
- Melbourne, Australia
- Brussels, Belgium

We explore the schemes that have been implemented in these cities through the outcomes, challenges, funding, and future strategies associated with each. We hope that this will help to inspire local authorities, business improvement districts (BIDs), and private sector organisations to continue delivering innovative streetscape schemes that support healthier, greener, safer and more pleasant cities.



Source: created with Google Maps My Maps

# Healthy Streets Everyday

**The Healthy Streets Approach is a global policy framework that embeds public health in the design of our streets [7]. It aims to make streets healthy, safe and welcoming places for everyone by prioritising people and their needs. The approach is underpinned by 10 'Healthy Street Indicators' used to create healthy streets. The Mayor of London and TfL are actively promoting this Healthy Streets approach in London.**

CRP's Healthy Streets Everyday (HSE) is a cross-sector project to empower boroughs, businesses, and communities across London to deliver cycling and pedestrian-priority healthy streets. It aims to increase cycling and walking rates and reduce emissions and exposure to toxic air pollution. CRP and the HSE programme are excited to support changes to London's urban realm that promote active travel, greening, environmental health, car-free behaviour, and economic resilience.

The streetscape schemes discussed in this report have incorporated the Healthy Streets approach. Understanding the outcomes and challenges associated with these will help London and the UK apply best practice and learn from the approaches of other cities around the world when it comes to using the Healthy Streets Approach.

# 03 A Global Perspective

## Looking Globally

Different countries and cultures worldwide have different attitudes towards streetscape designs and active travel. These varying attitudes can result from cultural customs, local laws, access to resources, class, ethnicity, education, religion and belief structures [8]. As a result, streets across the globe have been designed differently as part of the COVID-19 response. Nevertheless, many of the goals have remained the same: to provide more space, enable individuals to take more independent forms of travel, and support businesses with their economic recovery. A global outlook allows us to learn from cities doing things creatively, differently, or even for the first time. This guidance document aims to facilitate these learnings by exploring the streetscape COVID-19 recovery strategies of seven cities from different continents, starting with London.
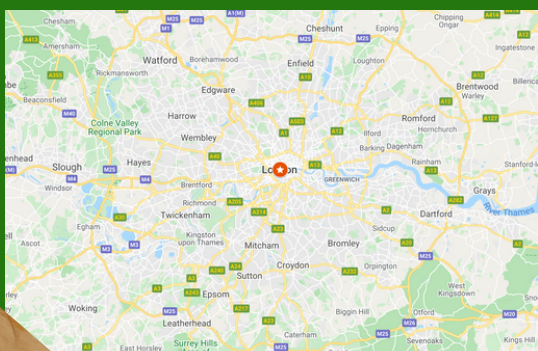
# Reallocating Space on our Streets - London, United Kingdom

**London**
- Population: 9.002 million (2020) [9]
- Area: 1,572 km² [10]
- Country: United Kingdom, Europe
- Major Lockdowns: March 2020 to May 2020; November 2020 to December 2020; January 2021 to July 2021 [11]
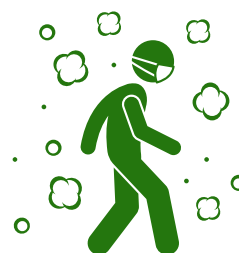
Only 56% of households in London own a vehicle. This statistic is considerably lower than the average for the rest of England at 80% [15].
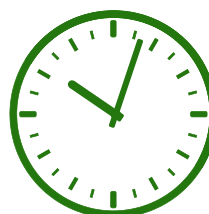
The average person living in London spends 115 hours stuck in traffic every year [16].

Much of London still exceeds the legal limits for NO2, PM10 and PM2.5 levels [17].

## Introduction

London is made up of 33 local authorities [12]. The city is home to cultural institutions that encourage tourism from across the globe. It is also one of the global financial and professional services industry centres, delivering considerable impacts across the city, particularly to the City of London [13].

The City of London, also known as the Square Mile, is the financial district of London[14]. It is the ancient core of London and dates back to Roman times. To the City of London's west is the City of Westminster, which forms a core part of Central London.

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**COVID Streetscape Response**

To combat the spread of the virus, many of London's COVID response measures involved implementing more walking and cycling projects. TfL's *Streetspace* fund and DfT's active travel grants have provided much of the funding for these projects. More than 120km of new or upgraded cycle routes have been delivered or under construction since the start of the pandemic up to January 2022 [18]. Other measures have included hundreds of kilometres of traffic restrictions, extended pavements, new School Streets and many more junction safety improvements [19]. For example, on the infamous Park Lane, a major road in the City of Westminster next to Hyde Park, coach parking was temporarily removed through the Streetspace scheme in favour of a cycle lane and shared space zone in June 2020.

**"Nearly half of London's households don't own a car. Those on low incomes are far less likely to have a car. Making the streets safer for people walking & cycling and providing good public transport is a matter of fairness and social justice."**

- Will Norman, London's Walking and Cycling Commissioner [20]

Similarly, local authorities, such as Westminster City Council, have played a vital role in implementing outdoor dining schemes within London. During the pandemic, more than 50 streets in Westminster benefited from pavement widening, temporary road closures, or the repurposing of parking bays to facilitate outdoor dining on streets as part of their *al fresco* dining scheme [21]. Similar schemes, sometimes called *Streateries*, were also implemented by other local authorities such as the Royal Borough of Kensington and Chelsea, London Borough of Camden, and London Borough of Southwark [22]. Additionally, the temporary *Eat Out to Help Out* scheme, led by UK central government, worked in tandem to support the hospitality industry in August 2020 by subsidising meals out [23]. It also encouraged customers to use the additional outdoor dining space [24].

Many of the schemes focussed on reallocating road space to provide more room for walking, cycling and outdoor hospitality. As a result, this has supported Londoners with a green recovery from COVID-19 by facilitating social distancing and enabling active travel whilst improving air quality and supporting business recovery.

**Outcomes**

Streetspace interventions, like the introduction of 22 new school streets in the London Borough of Islington during the pandemic, have supported more Londoners to cycle and walk. They have also helped improve air quality in the city. Positive outcomes include:

**70** per cent less air pollution caused by vehicles during the first lockdown in 2020 [25]

In 2020, TfL data showed that 31% of Londoners chose to walk instead of using an alternative mode of transport [26] **31**

The Santander Cycles shared bicycle scheme in London reported its record year in 2020 for ridership, showing the surge in cycling experienced in London [27]. Additionally, outdoor dining schemes, like the City of Westminster's *al fresco* dining, were widely welcomed by residents, businesses, and local authorities.

Councillor Matthew Green, Westminster City Council's cabinet member for business, licensing, and planning, said:

"It's no exaggeration to say that outdoor dining has saved many businesses from closure - creating more than 17,000 additional covers across Westminster. We are proud to be able to support the continuation of al fresco dining and will work closely with residents and businesses as we explore permanent schemes." [28]
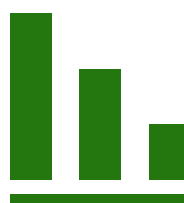


Photo credit: Transport for London

57% of Londoners say they now go on more walks for exercise or walk for longer than they did before the pandemic [29]

240% increase in leisure cycling seen over the weekend of 26-28 February 2021 compared to the same weekend in 2020 [30]

In 2020, motor vehicle numbers in the City of Westminster reduced by around 24% compared to 2019 [31]

**Future Strategy**

All these changes are supporting broader key objectives in the COVID-19 recovery at the city level, through the London Sustainable Development Commission [32], and nationally through the Clean Air Strategy [33], Build Back Better[34] and Green Industrial Revolution [35] strategies. However, the rapid rollout of pedestrian and cycle priority schemes has also accelerated the Mayor of London's transport strategy goals. The transport strategy includes a target for 80% of journeys by walking, cycling and public transport by 2041 [36]. Many of the temporary Streetspace initiatives implemented have now been made permanent or have been extended, to help achieve this target. Moreover, many London boroughs have accelerated their sustainable transport agendas by creating schemes such as new Low Traffic Neighbourhoods (LTNs) and the roll out of school streets.

**"London's road to recovery cannot be clogged with cars."**

- Sadiq Khan, Mayor of London [37]

Moving forward, it will be vital that local authorities and the city-wide government implement more or new ambitious streetscape initiatives to ensure that these strategic targets and objectives are met. Doing so will help support improvements in air quality, provide healthy streets, create vibrant economic zones, and increase cycling and walking rates in London and the UK more widely.

# What do the public think?



Kate Nicholls
@UKHospKate

Al fresco dining has been a lifeline for many independent hospitality businesses across Westminster as well as adding vibrancy and life to our public spaces - its continuation will be key to supporting the City and the sector as it recovers, so make sure to respond to consultaion

Cllr Timothy Barnes ✔ @CampaignTim · Aug 31
Current Al Fresco outdoor dining comes to an end across @CityWestminster at the end of Sept. There are a series of local consultations asking residents if they would like to see any continue, inc Nth Audley St in #mayfair

westminster.gov.uk/alfresco-audley

@mayfairforum @Grosvenor_LDN

1:39 PM · Aug 31, 2021 · Twitter Web App

Paul Dimoldenberg
@PDimoldenberg

Listen to Residents on Al Fresco Dining.  Sign the PETITION now. - Westminster Labour

westminsterlabour.org.uk
Listen to Residents on Al Fresco Dining. Sign the PETITION now. - Westminster L...
We, the undersigned, demand that Westminster Council listens to residents and put the needs of the community at the heart of any future plans for Soho. In Jul...

5:08 PM · Mar 16, 2021 · Twitter Web App

Phillips Harrod
@PhillipsHarrod

More than 80% of residents in #CoventGarden and #StJohnsWood supported the continuation of outdoor dining, Westminster City Council said.

PEDESTRIAN ZONE
Mon - Fri
5 pm - 11 pm
Saturday
Midday - 11 pm
Sunday
Midday - 10.30

**BBC NEWS**

bbc.co.uk
Covent Garden and St John's Wood to continue al fresco dining
Outdoor dining is made permanent in parts of central London but Soho's future remains unclear.

10:50 AM · Sep 28, 2021 · Twitter Web App

## Listen to Residents on Al Fresco Dining. Sign the PETITION now.

15th March, 2021

We, the undersigned, demand that Westminster Council listens to residents and put the needs of the community at the heart of any future plans for Soho.

In July 2020, Westminster Council introduced a street closure scheme to allow for al fresco dining. The Council promised that residents would be "at the heart" of their approach.

We understand the importance of supporting hospitality businesses. But Conservative-led Westminster Council has failed to protect the interests and needs of the community.

A combination of poor management of the scheme including the repeated violation of social distancing rules, inadequate access for disabled and elderly people, poor enforcement, extreme noise, and other issues, drove many residents to near breaking point during last year's al fresco scheme.

# Creating Vibrant, Healthy, Economic Zones - New York, USA

**New York**
- Population: 8,804,190 (2020) [38]
- Area: 781 km² [39]
- Country: United States of America, North America
- • Major Lockdown: March 2020 to June 2020 [40]

uniqueness within these boroughs, with green spaces more prevalent in the north of the Bronx, whilst the 'hustle and bustle' is synonymous with Wall Street and Manhattan's financial and professional services industries. Nevertheless, air pollution and congestion are significant challenges experienced across all New York's boroughs:

**Air pollution caused an estimated 6% of deaths per year before the pandemic [42]. This number is equivalent to the health effects of each New York citizen smoking 3 to 5 cigarettes per week [43].**

## Introduction

New York City is the most populous city in the United States [41]. It comprises five boroughs with unique identities and characteristics: Manhattan, Queens, The Bronx, Brooklyn, and Staten Island. There is

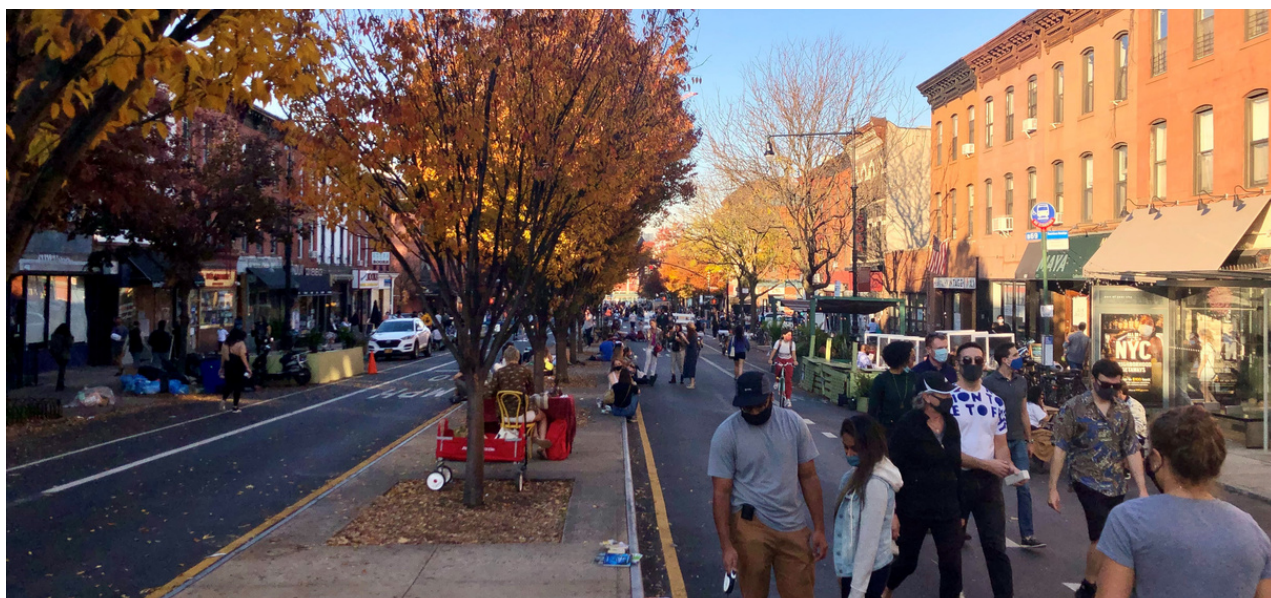**Additionally, 45% of households in New York City own a car [44].**

Photo credit: Nick Garber/Patch

**COVID Streetscape Response**

Transport systems were impacted significantly following the lockdown in 2020, with a major reduction in ridership on the New York public transport network [45]. As a result, New York City's response to COVID-19 involved several streetscape schemes that support economic activity and active travel. These schemes have been enabled through some public-private partnerships and policy levers such as the New York Open Streets programme; beginning in March 2020, this has been led by Mayor Bill de Blasio and the City of New York [46].

One scheme associated with the programme was on Vanderbilt Avenue, in the Prospect Heights neighbourhood of Brooklyn. On Fridays between 5pm – 10pm, and Saturdays and Sunday's between 12pm – 10pm, Vanderbilt Avenue was closed to traffic between Park Place and Atlantic Avenue [47]. The aim was to support the businesses and residential community with outdoor dining, street activities and open outdoor spaces [48]. The project, which ran between August 2020 and November 2021, was set up by The Prospect Heights

Neighborhood Development Council, a civic organisation providing advocacy for neighbourhood-wide issues on behalf of the residents and businesses of Prospect Heights. The scheme also received cooperation from the NYPD, and sponsorship and branding from at least ten businesses [49].

Another project that gained attention was the installation of a cycle lane on the iconic Brooklyn Bridge [50] . Traditionally the bridge had been dominated by motor vehicles. However, a significant transformation in 2021 saw it redesigned to incorporate a fully pedestrian zone with a segregated cycle lane. Previously, cyclists and pedestrians shared the space, with the newly segregated cycle lane formerly being one lane of traffic [51].  The cycle lane's installation was completed in September 2021 and is likely linked with Mayor Bill de Blasio's Vision Zero bill that passed in 2013. The bill has led to an increase in projects that prioritise pedestrians and cyclists in New York City.

**Outcomes**

The COVID-19 pandemic has been a trying time for businesses around the world. However, the Vanderbilt Avenue Open Streets programme provided a boost to businesses in the area despite the challenging circumstances of the pandemic:

**22 restaurants participated in the programme.**

**Restaurants reported an increase of 54% in customer visits.**

54

**Around 65-70 new jobs were created in the area [52].**

The scheme also proved popular with residents, as weekends were filled with entertainment, whilst further developments in the area included a bicycle lane to support more cycling.

Similarly, the Brooklyn Bridge cycle lane has enabled pedestrians and cyclists to travel safely and sustainably from Brooklyn Heights to Manhattan's financial district. Although monitoring data has not yet been collected, outcomes could be positive for road safety, air quality and cyclist and pedestrian counts. Support for the initiative has also been positive; many consider it a historic measure for transitioning away from a car-based society.

**"There's no better sign that the cycling boom is here to stay than permanently redesigning the most iconic bridge in America. This bike lane is more than just a safe, convenient option for thousands of daily cyclists. It's a symbol of New York City fully embracing a sustainable future and striking a blow against car culture."**

- New York City Mayor Bill de Blasio [53]



Photo credit: eddie-hernandez.com / Shutterstock.com

## Challenges

Nevertheless, the projects have not been without their critics. As of October 2021, the rollout of the Open Streets programme across New York was stalled, as fewer than half of the Open Streets proposed by Mayor Bill de Blasio and his Department of Transportation were restricted to motor vehicles [54]. Similarly, efforts have been focussed on Manhattan, with 8 miles of street space being closed off to motor vehicle traffic, compared to only half a mile in the more suburban area of The Bronx [55]. Moreover, funding the programme in some places has been a challenge – Sunset Park's Open Streets programme has languished with businesses having to cover the costs of barricades and street furniture to obtain an Open Street [56].

A further challenge for New York is the avoidance of a car-based recovery. The use of public transport has remained low despite restrictions easing, whilst motor vehicle traffic is close to its pre-pandemic levels. As a result, schemes that encourage walking, cycling and public transport are becoming more critical for New York to avoid a car-based recovery. The need has been highlighted by critics of the Brooklyn Bridge Cycle Lane. Critiques include that the cycle lane is very narrow and that perhaps more ambition could have been shown to close the road space to motor vehicle traffic and take advantage of the bicycle boom in New York City [57, 58].



Photo credit: Frank Lynch, Copyright 2020

**Future Strategy**

Despite some challenges, Mayor de Blasio has made the Open Streets programme permanent, with more streets being selected to join the programme [59]. In April 2021, the mayor announced that a total of USD 4 million funding would be committed to the programme [60], providing an opportunity for communities in dense areas of New York City to reimagine their public spaces and streetscapes. Furthermore, the Brooklyn Bridge bicycle lane is part of broader strategies across the city to increase bicycle infrastructure and install more segregated and safe cycle lanes [61].

**"Over the past eighteen months, New York City has been experienced a dramatic #BikeBoom, and countless New Yorkers have spoken with their pedals, showing that biking is often the fastest, most affordable, and most satisfying way for you to get where you're going - even if there's a bridge in between you and your destination"**

- Caroline Samponaro, Head of Transit, Bike and Scooter Policy at Lyft, the operator of Citi Bike [62]

**Reflections:**

Funding by New York's Open Streets programme on Vanderbilt Avenue shows the significant influence of private sector organisations sponsoring public sector initiatives. Involving local businesses as part of the scheme has helped provide momentum and support in terms of branding and funding. A reflection for London is to consider the opportunities for local businesses to support the delivery and maintenance of streetscape and pedestrian priority schemes through creative models of branding, sponsorship or ownership.

**Learnings in Practice**

Public-private partnerships and sponsorships for streetscape interventions have already been successfully utilised in London, for example, in the London Borough of Hammersmith & Fulham. A local Business Improvement District board member and business located on Hammersmith Grove, Medidata, funded the creation, build and delivery of one of the four parklets in Hammersmith & Fulham [63]. Medidata, a private technology company, funded this project to contribute to their environmental and social objectives by making their office surroundings greener and providing space to give back to the community [64].

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# What do the public think?



**Queen Anne Greenways**
@QAGreenways

The Vanderbilt Avenue open street! Why aren't more city streets safe enough for kids to navigate?

7:50 PM · Sep 12, 2021 · Twitter for iPhone

**David Andrew**
@hank_wander

The Brooklyn Bridge separated bike lane may be the best project #NYCDOT has delivered in years. It has turned walking over this bridge into an experience of pure peace and joy.

6:02 PM · Nov 20, 2021 · Twitter for iPhone



**Jason Rabinowitz**
@AirlineFlyer

The Brooklyn Bridge bike lane, it's a dream. Amazing to bypass crowding on the pedestrian walkway and use the somewhat narrow but totally usable bike lane.
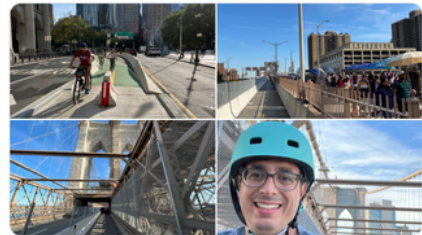
9:29 PM · Sep 25, 2021 from Brooklyn Bridge · Twitter for iPhone



**Chester A. Arthur**
@ZacAKAMadu

Brooklyn's Miracle on Vanderbilt Avenue is a blueprint for how to save restaurants, retail from the Covid Depression.

Close the streets to through traffic and open them up for pedestrians, outdoor dining and commerce.

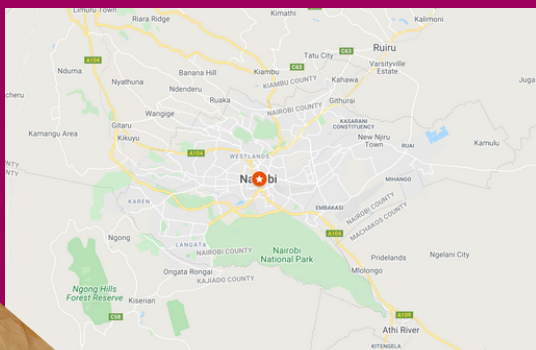This whole time the solution has been hiding in plain sight!

6:08 PM · Sep 2, 2020 · Twitter for Android
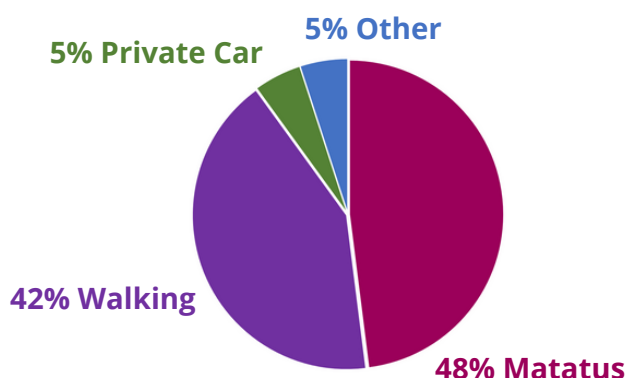
# Starting the Active Travel Journey - Nairobi, Kenya

**Nairobi**
- Population: 4,922,000 (2021) [65]
- Area: 696 km² [66]
- Country: Kenya, Africa
- Major Lockdowns: March 2020 to June 2020; March 2021 to May 2021 [67, 68]



few use a private car. The high percentage of walkers in Nairobi is likely due to a lack of affordable alternatives.



**5% Other**
**5% Private Car**
**42% Walking**
**48% Matatus**

## Introduction

Kenya's capital city, Nairobi, comprises nine districts and is in the southern end of the country [69]. Nairobi is dominated by industry, mainly construction and food production. However, there is also a significant tourism sector, with many visiting the city, which is close to beautiful national parks and beaches [70]. Around 60% of residents currently live in dense, informal housing separated from the wealthier city centre [71,72].

Air pollution levels have worsened since the 1970s, which may be driven by congestion associated with poor road infrastructure and a high number of construction sites due to the city centre's rapid urbanisation [73]. Most people in Nairobi walk or ride matatus (informal, privately-owned minibuses), and
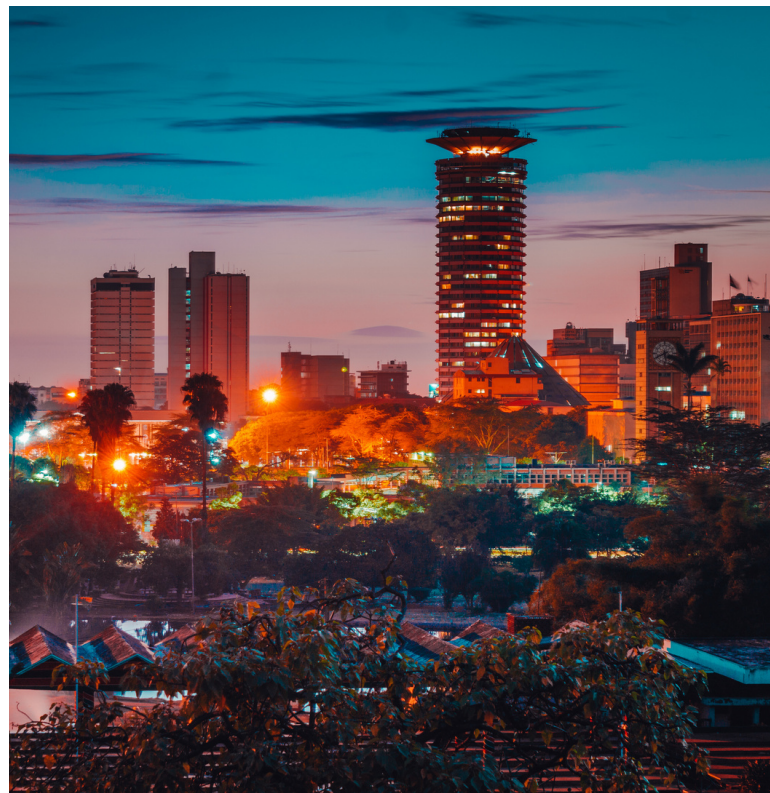
**COVID Streetscape Response**

In 2020, Nairobi suffered high COVID-19 infection rates, possibly due to a lack of social distancing on busy commuting routes and services [74]. Additionally, in March 2020, 81% of the population lost their jobs and livelihoods, meaning many families were living in poverty [75].

In response to these challenges, the Nairobi Metropolitan Services, Kenya Urban Roads Authority, and Kenya National Highways Authority carried out schemes to facilitate the changing shift towards independent, active travel [76]. The schemes included converting street parking spots into pedestrian walkways and cycle lanes in the centre of Nairobi. Furthermore, Nairobi City County Government has committed to using at least 20% of its existing and future transport budget to invest in infrastructure for non-motorised transport users [77]. Examples of this include new pedestrian and cycle lanes that have been finalised and installed on Kenyatta Avenue, Wabera and Muindi Mbingu Streets [78]. The city has more plans for a cycle lane and footpath installations soon [79].

Another focus has been increasing cycling rates through raising awareness and behaviour change. In September 2019, a Bicycle Mayor for the city was appointed as part of The Nairobi cycling movement [80]. The movement forms part of a global bicycle mayor programme by Amsterdam-based social enterprise, BYCS [81]. Even throughout the pandemic, the Nairobi Bicycle Mayor Salome J. Kanini emphasised promoting, encouraging, and empowering cycling for women and girls [82]. As part of this, Kanini organised several safe rides and events throughout 2020 and 2021 to address some of the social barriers that hinder women from riding their bicycles more often [83].



Photo credit: Duncan Mboyah / RoGGKenya.org

## Outcomes

COVID-19 has exacerbated economic inequality in Nairobi and highlighted the need for better active travel infrastructure. Many residents have needed to turn to cheaper, more independent options to move around the city. For example, social distancing constraints placed on matatu vehicles meant that many were only filled to half capacity, which led to increased fare costs, worsening existing issues around high prices for many low-income residents. Many of these residents shifted to walking as a result [84]. Consequently, re-prioritising street space for an increasing number of pedestrians has become increasingly critical in terms of Nairobi's' active travel approach.

Additionally, the recent introduction of the Bicycle Mayor, coupled with local cycling activism by residents, may have contributed to more people cycling and increased bicycle sales during the pandemic. Shopkeeper Jimmy Karumba explained that his used bicycle store in the city centre experienced a 50% rise in sales in 2020 [85]. Additionally, in June 2021, 55,000 daily trips in Nairobi were made by bicycle [86]. However, there is significant room for improvement if barriers such as road safety and infrastructure are addressed [87].

**Challenges**

Despite experiencing quieter streets during the pandemic, motorised traffic has returned to pre-pandemic levels in Nairobi [88], which has led to more congestion and more aggressive driving behaviour. Motor vehicle drivers often ignore pedestrian and bicycle lanes and use them as extra lanes or parking spaces [89].  This bad driving has added to the several safety challenges that pedestrians and cyclists in Nairobi already face. The lack of safe infrastructure means pedestrians and cyclists must often pass through crowds and avoid open drains, potholes, street vendors and motor vehicles [90]. Pedestrian safety particularly impacts younger people as 21% of road accident victims in Kenya

are children and teenagers [91]. Similarly, women and girls are significantly less likely to cycle; only 0.4% of cyclists are female [92].

As a result, active travel still has a long way to go in Nairobi to ensure people feel safe. The provision of more active travel infrastructure will help give visibility to cyclists and walkers. However, there may also be a need for more educational projects that address driver behaviour and attitudes to reduce conflicts between road users. Similarly, programmes to address the social and cultural barriers to cycling, such as those run by Nairobi's Bicycle Mayor, will be imperative to increase cycling rates in the city.

## Future Strategy

Nairobi City County's NMT Policy, which proposes cycling as a congestion mitigation strategy, was first published in 2015 and revised in 2019. However, the city is still developing its active travel network and long-term plans [93]. Local-level cycling activism, awareness-raising, and initial city planning to prioritise street space for pedestrians and cyclists are crucial to support the development of these plans. Nairobi is at an earlier phase of its active travel planning and infrastructure, which presents an exciting opportunity for shaping the city. More than ever, local communities and residents can influence the city in the future.

## Reflections

Some of the challenges experienced by Nairobi highlight the importance of using public engagement and communications to supplement infrastructural improvements. In Nairobi, some motor vehicle drivers have been using cycle lanes as additional driving or parking space. High-profile awareness-raising projects can educate drivers and the public about respecting active travel users, helping to reduce conflict and improve safety. A reflection for London is to utilise public engagement and communication campaigns more widely as part of its streetscape projects. Even small local schemes targeting specific parts of a neighbourhood can benefit from public engagement. Utilising communications through awareness-raising campaigns can help to ensure they are successful.

## Learnings in Practice

An example of a London-wide active travel campaign is the "Now is the time" project by TfL and the communications agency VCCP. The campaign, launched in August 2020, encouraged people to travel at quiet times or in different ways, including using new and existing walking and cycling routes, to make social distancing possible on public transport [94]. The campaign particularly highlighted the new active travel infrastructure funded by the Streetspace for London programme.

# What do the public think?

# Rapid Roll-Out of Cycling Infrastructure - Bogotá, Colombia

**Bogotá**
- Population: 11,167,392 (2021) [95]
- Area: 1,637 km² [96]
- Country: Colombia, South America
- Major Lockdowns: March 2020 to September 2020; some weekends (Friday-Sunday) in January 2021 to April 2021 [97,98]
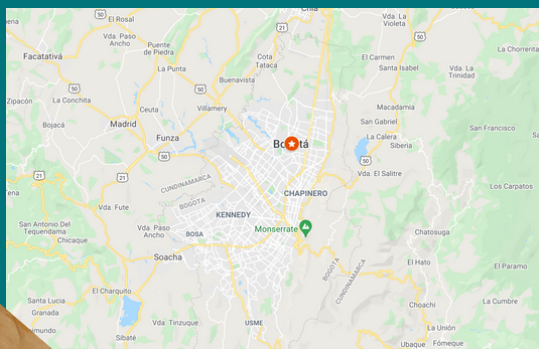


## Introduction

Bogotá is the largest and most populous city of Colombia - it is the nation's capital and is divided into 20 localities [99, 100]. The city has many cultural attractions and vibrant street art. It is also close to world-renowned mountain ranges and national parks [101].

However, Bogotá experiences high congestion rates in the city centre; drivers lose around 133 hours annually due to congestion, despite only 30% of residents owning a car [102, 103]. In contrast, more than half of all households own at least one bicycle or can easily borrow one using local bicycle-sharing schemes like 'Pedaleando por Bogotá', which has several bike-sharing

stations located around the city [104].

Consequently, the city has welcomed opportunities to reduce car use. Since the 1970s, the 'ciclovía' (Spanish: "cycleway") concept has meant cars are banned from several roads in Bogotá between 7am to 2pm every Sunday [105]. Around two million residents use these *ciclovías* every week to cycle, jog, rollerblade and play. Additionally, in 2016, Colombian legislation was introduced to promote bicycle usage by providing incentives to employers for cycling, dedicating more space for bicycle parking, and enforcing bicycle infrastructure for any new road project [106].

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**COVID Streetscape Response**

Bogotá has focussed on encouraging cycling to combat COVID-19 infection rates. Due to the pandemic, residents used public transport less, with ridership down by nearly 90% [107]. To combat this, the Mayor of Bogotá, the District Secretariat of Mobility, and the District Institute for Sports and Recreation, initially added 35 kilometres (around 22 miles) of pop-up emergency cycle lanes during the first lockdown, using temporary cones, on existing roads for motor vehicles in the city [108]. More kilometres of cycle lanes have been added since. This project received significant public funding from the local government to support the city administration's vision to become a 24-hour city, where work, commerce, and culture happen around the clock in Bogotá [109, 110].

Additionally, as COVID-19 impacted lower-income households in the city the greatest, the Secretary of Social Integration and the Bogotá District Mayor's Office identified and mapped deprived areas within the different localities of the city [111]. These maps helped target areas where cycle lane expansions were prioritised and identify areas requiring more in-kind subsidies [112].



BOGOTÁ **after** adding 22 miles of temporary cycling infrastructure

Existing bike lanes

Temporary bike lanes during quarantine

Source: Data by Secretaría Distrital de Movilidad de Bogotá, OpenStreetMap, Map tiles by Stamen Design under CC BY 3.0

WORLD RESOURCES INSTITUTE

Source: World Resources Institute, 2020

**Outcomes**

Although the city recorded fewer daily bicycle journeys in 2020 than in 2019, cycling now makes up a higher percentage mode share. For example, in 2020, 13% of trips were made by bicycle, compared to 6.6% in 2019 [113]. Consequently, the role of the bicycle is now more important for Bogotá and its residents, and the rapid rollout of pop-up bicycle lanes will certainly have contributed to increasing its prominence in the city. Prioritising safer, more efficient, and easier cycling journeys has been at the heart of Bogotá's COVID19 recovery.

Additionally, as with many cities worldwide, air pollution reduced drastically during the COVID-19 pandemic and lockdowns. The city experienced an 80% drop in atmospheric pollution during the lockdown in early 2020 [114]. Fewer motor vehicles, fewer journeys due to COVID restrictions, and more cycling infrastructure may well have contributed to this, and reductions in pollution levels were reported throughout 2020 [115, 116, 117].

**Challenges**

However, bicycle thefts have become more common as cycling uptake has increased. Over 8,000 cases of bicycle theft were reported between January and September 2020, increasing by 36% compared to 2019 [118].

Safety concerns have also created challenges for cyclists. Drivers routinely neglect to use indicators and run red lights, increasing the risk of collisions [119]. Women are also more at risk of being harassed, even when on bicycles [120]. City authorities in Bogotá must address these challenges strategically whilst rolling out further targeted cycling provisions.



Photo credit: Gabriel Leonardo Guerrero / Shutterstock.com

**Future Strategy**

The rollout of cycling infrastructure is a key strategic priority in Bogotá. The pop-up cycle lanes are intended to be expanded further and made permanent [121]. Additionally, in 2021, Bogotá created The Bike Public Policy, which details how Bogotá will direct and guide around US$ 600 million investments on cycling policy for the next ten years [122]. This policy and funding will invest in research on cycling behaviour and technologies, more cycle lanes, and bicycle sharing scheme expansions. It will also focus on sustainable development, including tackling existing inequality and poverty conditions in the city [123]. This policy was made possible by the strong pro-cycling social movement and decision-makers prioritising cycling [124].

**Reflections**

Bogotá has been encouraging cycling for over 40 years, since the first car-free 'ciclovía' program took place in the 1970s. Cycling and active travel have now become embedded in Bogotá's culture. Consequently, the large-scale streetscape schemes have been viewed positively and generally accepted by residents. A reflection for London is to keep in mind that cultural changes often don't happen quickly but are instead built over time. London must work towards a shared vision for cultural change towards walking and cycling. Ensuring that current and future strategies reinforce and build on this vision is crucial to enabling positive long term and societal change.

**Learnings in Practice**

The UK's new changes to the Highway Code are an example of further steps towards creating attitudinal and cultural change towards walking and cycling. The updated UK Highway Code aims to protect cyclists and pedestrians further and ensure a more mutually respectful culture of safe and effective road use that benefits all users [125, 126]. Will Norman, London's Walking and Cycling Commissioner, has welcomed the changes that have come into effect in January 2022 [127]. These updated rules may contribute to slowly changing road use culture and Londoners' attitudes over the coming years.

# What do the public think?



Danitza Toca
@Danitok5

Replying to @carlosfpardo

I like the idea of these new bets for sustainable mobility, it should be joined to the safety strategies for the people in Bogota. If the city want to conquer users, should not increase the numbers of bicycle thefts or attacks on bike-users.

1:41 PM · Nov 4, 2021 · Twitter for Android

Chris N. Morfas @MorfasChrisN · Mar 29, 2020
Post-quarantine, the temporary lanes may provoke a debate about the allocation of public space and the need for Bogotá to improve the QUALITY of its bike infrastructure (as opposed to its constant touting of the QUANTITY of its mostly poor-to-mediocre ciclorrutas) 2/

Chris N. Morfas @MorfasChrisN · Mar 29, 2020
One intellectual here says they offer a possible 3rd generation evolution of bike infrastructure: 1) Ciclorrutas via sidewalk takings by E. Peñalosa 1998-2000, 2) hit-and-miss in-street bikeways by Petro 2012-15 and Peñalosa2 2016-19, 3) Permanent roadway space reallocations? 3/

Chris N. Morfas @MorfasChrisN · Mar 29, 2020
The in-street bikeways, even if they lasted only a few days, gave Bogotá bicyclists an idea of what a logical network of connected bikeways prioritizing direct, efficient, and coherent bike travel would look like. 4/

Chris N. Morfas
@MorfasChrisN

New Mayor Claudia López is a very enthusiastic supporter of bicycle transportation and may see this as her opportunity to make real E. Peñalosa's admirably ambitious but ludicrously premature August 2018 declaration of Bogotá as the "Bicycling Capital of the World." 5/fin

4:55 PM · Mar 29, 2020 · Twitter Web App

Chris N. Morfas
@MorfasChrisN

A visualization of bicyclists' carnage along the contested Calle 13 in Bogotá, where a new in-street bike lane has raised motorists' ire. Image courtesy @garciaart3 2c/
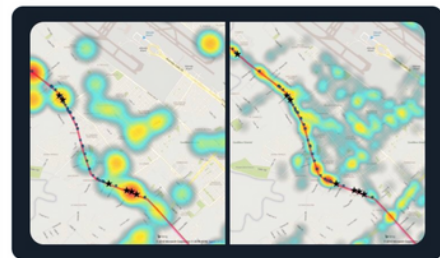
11:15 PM · Oct 29, 2020 · Twitter for iPhone

# Technological Innovation and Avoiding Personal Contact - Seoul, South Korea

**Seoul**
- Population: 9,733,509 (2020) [128]
- Area: 605 km² [129]
- Country: South Korea, Asia
- Major Lockdowns: No full nationwide lockdowns [130]



## Introduction

South Korea's capital Seoul is located on the Han River in the north-western part of the country and is divided into 25 districts [131]. It is the cultural, economic, and political centre of South Korea [132].

Seoul's roads have traditionally been designed for cars. However, since 2004, the Seoul Metropolitan Government (SMG) has set ambitious goals to prioritise pedestrians and cyclists in their transport policies through pedestrian-only streets and safe, segregated cycle lanes [133].

Seoul has also focussed on technology. In 2019, the Seoul Metropolitan Government and then Seoul Mayor, Park Won-soon, launched a $1.2 billion strategy to turn Seoul into a "capital of big data" by 2022, as part of the municipal government's smart city project [134]. This plan supports its residents and businesses by using intelligent technology and real-time data to make life more convenient [135].

**COVID Streetscape Response**

During the pandemic, South Korea kept COVID-19 infection numbers low due to smart COVID-19 tracking systems, movement and social contact restrictions, and the replacement of public transport trips with active travel alternatives [136, 137]. Seoul's smart city strategies and new technology, such as detailed track and trace systems, were critical in enabling this [138]. Consequently, the private business sector in Seoul has used the coronavirus pandemic as an opportunity to create and roll out more innovative smart-city technology solutions.

One example of this is highlighted by the food delivery app creators, Woowa Brothers. Months before pandemic, the Woowa Brothers started trialling their new "Dilly Drive" outdoor food delivery robot at Konkuk University in Seoul [139]. Throughout the pandemic, the need for social distancing enabled the trials to be extended to other cities in South Korea [140]. The Woowa Brothers are now hoping to launch the "Dilly Drive" robot soon, once their technology has been fully perfected [141].



Photo credit: Pickool/ Woowa Brothers

Other organisations in South Korea have also realised the potential of outdoor delivery robots. In November 2021, 7-Eleven announced that they are conducting a three-month trial for a new delivery robot, "Neubie", at an apartment complex in southern Seoul [142]. Residents can order food and drinks through delivery apps, like Yogiyo, and Neubie will deliver these products right outside their apartment building [143].



Photo credit: Korea Seven

As a result, the pandemic has reinforced desires for a contactless and efficient delivery experience in Seoul, supporting South Koreas' smart city objectives. By using technology in urban areas, Seoul aims to:

- mitigate climate change
- decrease energy consumption
- reduce community transmission of COVID-19 [144]

However, Seoul has also supported its residents with safer active travel infrastructure by upgrading existing cycle lanes and creating new cycle paths. One example was implementing a 5.94-kilometre section of a cycle lane that runs along

Cheonggye Stream. The lane connects Cheonggye Plaza near Gwanghwamun to Gosanja Bridge in the eastern ward of Dongdaemun [145]. The lane now enables an 11.88-kilometre round trip in a safer environment with clearly separated cycle paths. Similar improvements have also been undertaken near Jamsu Bridge. Here existing cycle lanes have been upgraded to safely separate cyclists and pedestrians. By upgrading cycle infrastructure, Seoul's government has encouraged its residents to choose cycling as an independent transport mode whilst removing some concerns around road safety.



Photo credit: The Korea Times

### Outcomes

Seoul's smart city strategy has been a key influence in their COVID 19 response. Economic activities that are *untact* (a term used to describe doing things without direct human contact) have increased in South Korea [146]. 71.6% of South Korean adults felt their *untact* economic activities had increased due to the pandemic. The South Korean central government's economic recovery plan includes a pledge to promote *untact* industries [147].

South Koreas emphasis on technology and the untact economy means that more delivery robots may well appear in more parts of Seoul and across South Korea. Many of these delivery robots, such as Neubie and Dilly Drive, are recent innovations. Therefore, the impact on air quality is unknown. However, these robots will take motor vehicles off the road, which suggests they may contribute to reducing air pollution.

Cycling rates have also increased with Seoul's citizens trying to avoid crowded, enclosed spaces on public transport and private vehicles. For example, the use of the public bicycle scheme in Seoul, Ddareungi, increased significantly from 2019 to 2020:



**From February to March 2020, Ddareungi ridership rates were 67% higher than in the same period in 2019 [148].**

**The increase was particularly noticeable during evening commutes, which went up 93% [149].**



Given that the *Ddareungi* public bicycle scheme covers the upgraded cycling infrastructure in Seoul, this improvement in road safety may also be reflected by more users [150]. Therefore, this has likely been an effective approach to supporting residents in Seoul with more independent, active travel choices at a more limited cost.

## Challenges

The rise in technology and the development of an untact society has left many older people behind and created a digital divide. Although most residents own a smartphone or computer, many older adults are unfamiliar with new technologies and apps. One example highlighting this gap was the "mask crisis" in Seoul at the beginning of the pandemic. Young people used new mobile applications and websites to check real-time mask inventories from retailers, so they knew exactly where to get masks. Meanwhile, elderly residents queued for hours at local pharmacies and often had to go home empty-handed as masks eventually sold out [151]. As a result, the pandemic has exacerbated the existing digital divide in Seoul. Supporting less 'tech-savvy' residents needs to be considered in Seoul's smart city plans to ensure any schemes associated with the strategy benefit everyone.

## Future Strategy

Seoul will continue its delivery of smart city initiatives as part of its US$1.2 billion smart city project, creating more smart solutions around the city by 2022 and investing heavily in technology to support its residents' daily lifestyles. Furthermore, Seoul wants to fast-track the current cycle lane system plans, with an objective of 15% of journeys to be by bicycle by 2030 and construct an effective network of cycle paths to cut congestion, fight pollution and reduce energy use [152, 153]. Bike-sharing schemes may well increase in use over the next few years, and mobility and new technology are central to the growth of Seoul and its smart city approach.

**Reflections**

Seoul's focus on becoming a Smart City shows how automation and technology can contribute to many economic, social, and environmental goals. Delivery robots such as Neubie and Dilly Drive highlight how new and innovative technology solutions can support businesses and residents, reduce congestion, and potentially improve air quality. Although London may not wish to have an '*untact*' society like that envisioned by South Korea, a reflection for London is that new technology can be an enabler to delivering environmental, social and economic goals. Supporting trials and incorporating new technologies as part of streetscape schemes could help to accelerate innovation and potentially assist in achieving broader, strategic aims and aspirations.

**Learnings in Practice**

London has already begun to use artificial intelligence (AI) to identify specific sites where traffic, streetscape and active travel measures could be implemented. By using real-time AI traffic counts, local authorities, BIDs and strategic agencies have better understood how people move around an area, which has enabled them to make changes that best support local people and their needs.

CRP supports local authorities to make the most of their traffic count data by analysing complex datasets to create insightful reports. If you are interested in finding out more, please email Fiona Coull fionacoull@crossriverpartnership.org

# What do the public think?



Vincent Roman, Esq.
@vincentstinks

Replying to @Hackneycyclist

Being in #seoul reminds me that there is a lot to be thankful for on LDN streets ... Checkout sudden end to this cycle lane!

4:35 PM · Mar 16, 2017 · Twitter for Android



Anika
@faboomama

Replying to @streetsforall @CityofBevHills and @JoyceSpatz

Some day, I want to see actually protected bike lanes like what I saw in Seoul. The yellow line divides bikes from foot traffic. The wide planters protects everyone from cars. The lane closest to the sidewalk is for taxis. The whole city is like this and it was great.

3:30 AM · Nov 19, 2021 · Twitter Web App



Korea Tourism Organization London
@KTOLondon

Public bike rental couldn't be easier, either: there are hundreds of locations across the city, and all you need to do is purchase a voucher and choose your bike! You can find out all about the rental system and check the status of rental locations here 👉 bit.ly/2ql2dJu
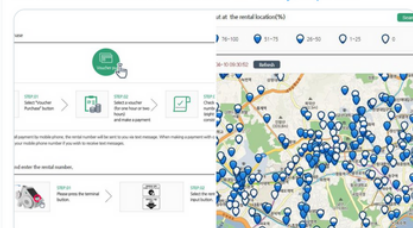
9:57 AM · Apr 10, 2018 · Twitter Web Client

# Speed and Space - Melbourne, Australia

## Melbourne
- Population: 5,061,000 (2021) [154]
- Area: 2,453 km² [155]
- Country: Australia, Oceania
- Major Lockdowns: March 2020 to October 2021 (6 lockdowns; 262 days) [156]
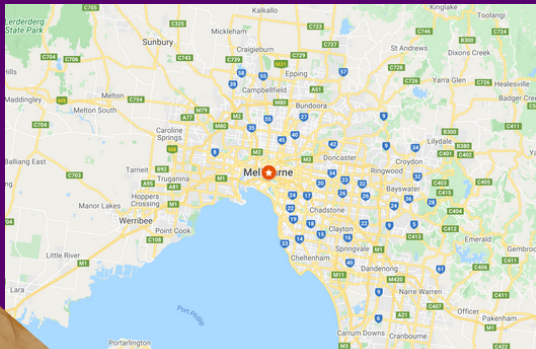




### Introduction

Melbourne is a multicultural, creative, and diverse city in the state of Victoria. It is the second-largest city by population in Australia [157] and has 31 municipalities [158]. Melbourne regularly features in the top 10 of the world's most liveable cities, with vibrant street art, an eclectic café culture and its location near national parks and world heritage sites [159].

However, Melbourne has been mostly car dominant:

In 2019, there were 769 vehicles registered in Australia per 1,000 inhabitants [160].

Residents of Melbourne spent around 85 hours stuck in traffic during commuter times in 2019 [161].

**COVID Streetscape Response**

Melbourne has spent the longest time of any city around the world in lockdown: 262 days, which is 45% of the time since the coronavirus pandemic was declared on 12th March 2020 up until 22nd October 2021 [162]. During the first half of 2020, Melbourne's public transport usage decreased by nearly 90%. Driving and walking numbers also reduced significantly due to stay-at-home orders issued throughout this time [163]. However, cycling numbers during this period rose, as individuals prioritised independent travel options to avoid contracting and spreading coronavirus [164].

To help support its businesses and residents, the City of Melbourne implemented experimental measures focused on reducing vehicular speed and re-prioritising space. One of the major programmes that the city delivered was the Little Streets programme. The programme was supported by the State of Victoria government and aimed to provide an outdoor and green recovery from COVID-19 [165]. The programme has been funded by the AUD 100 million Melbourne City Recovery Fund, with schemes implemented from September 2020 onwards, with many completed in early 2021 [166]. The programme focused on changing a selection of busy streets in Melbourne's CBD [167]:

- Flinders Lane
- Little Collins
- Little Bourke
- Little Lonsdale Streets

The streetscape schemes included creating more pedestrian space by widening footways and installing street furniture, trees, and other greenery. Furthermore, a shared space approach was introduced where pedestrians have priority, and speed limits for motor vehicles have been reduced to 20km/hr to improve safety [168].

Bicycle infrastructure has also been improved across the city. 40km of bicycle lane projects have been fast-tracked to enable residents to travel independently. Intersections have also been redesigned to give cyclists a head-start; this is common in London already [169, 170].



Photo credit: Karajarri man Marcus Lee / City of Melbourne

## Outcomes

The outcomes of these schemes can be difficult to assess; the City of Melbourne has experienced a series of lockdowns until the end of October 2021, so data is likely to be unrepresentative of any change [171]. Nevertheless, in April 2021, pedestrian footfall numbers had returned to 72% of pre-pandemic levels [172]. This number is the highest since the COVID-19 pandemic started in March 2020 [173]. Similarly, cycling numbers have risen significantly across the city, as residents chose more independent modes of travel and alternative exercise opportunities [174]. Although it is impossible to identify that this is a result of the Little Streets programme or the rapid rollout of cycling infrastructure, this will certainly help residents and businesses feel more comfortable returning to the CBD using active travel. Similarly, re-prioritising space and reducing speed can largely be seen as a positive approach to improving road safety, supporting businesses, improving air quality, and increasing active travel.

## Challenges

Much like the benefits, the challenges can be more difficult to assess given how much time Melbourne has spent in lockdown since the schemes have been implemented. However, shared space schemes can be perceived as controversial as there is a chance that collisions are more common between pedestrians, cyclists, and motor vehicles (even though lower speeds are less likely to result in significant injury) [175, 176]. Furthermore, there has not been broad support for the bicycle lane and pedestrian-priority streets amongst City of Melbourne Councillors [177]. The lack of support could threaten to stall plans that aim to expand the bicycle lane network and turn schemes from trials into permanent infrastructure [178].

## Future Strategy

The need to re-prioritise space and create pedestrian-priority streets has been supported by the Melbourne Transport Strategy 2030 and the Lord Mayor, Sally Cap [179]. The Little Streets schemes were introduced as a trial during COVID-19. There appears to be a real focus on implementing these permanently, if they are successful, to deliver outcomes outlined in the Transport Strategy [180].

> **"We know that 43 percent of cars in the Hoddle Grid are passing through the city, adding to congestion. We want to see this through traffic reduced, and the draft strategy includes actions to provide people with alternatives. This is work we would do in conjunction with the Victorian Government."**

- Lord Mayor of Melbourne Sally Cap, 2019

## Reflections

Melbourne has shown how temporary and experimental traffic measures can be used effectively to trial changes to streets. However, enabling schemes to become permanent requires evidence, especially when there may be opposition or lack of support. The lack of relevant data associated with Melbourne's new streetscape schemes makes it hard to prove that they are working as intended, partly due to the amount of time the city has spent in lockdown. The dearth of data highlights the importance of using monitoring and data as a tool for change. A reflection for London is to improve and expand its data monitoring network so that changes and

impacts can be more easily identified at both a local and regional level. Currently, many local authorities cannot implement the required level of monitoring to evidence the impact of a scheme, which could result in schemes being removed. Creating a more extensive, accessible data network could help provide both baseline and impact data for new streetscape schemes without authorities relying on implementing individual monitoring programmes.

### Learnings in Practice

*School Streets* have been trialled and made permanent on many London roads by local authorities during COVID-19. A *School Street* is a road outside a school with a temporary restriction on motorised traffic at school drop-off and pick-up times. Over 300 of these have been implemented across London [181]. To justify a permanent change, the London Borough of Richmond upon Thames monitors its *School Streets* by gathering data through traffic counts, conducting transport surveys, running public consultations, organising safety audits and reviews, and comparing penalty charge notice numbers [182]. All this information is collected before and after a *School Street*'s implementation. It is then reported to the borough's Transport and Air Quality committee to decide whether the *School Streets* should be made permanent or removed.

# What do the public think?



Jesse McNelis
@jessemcnelis

I was in @cityofmelbourne on Tuesday and the 'shared zone' of Flinders Lane seems like a failure. Drivers driving too fast and not giving way. Pedestrians with zero trust that drivers would give way. The zebra crossing removed at Degraves st is a clear regression #Melbourne

12:04 PM · Mar 10, 2021 · Twitter for Android

Bill Jansen
@WJ_cycle

New bicycle lane on William St, Melbourne certainly provides great parking spots for delivery trucks @cityofmelbourne



12:30 AM · Jun 12, 2020 · Twitter for iPhone

Red+Black Architect
@Red_Black_Archi

Replying to @AinsleyKRyan

I think one of the small silver linings of Covid is the freedom and latitude leaders have been given to try ideas out that would have previously been considered too radical.
Removing on street car storage is one of these, as is pedestrian priority little streets in Melbourne.

12:35 PM · Sep 9, 2020 · Twitter for iPhone

Gus Hoyt
@MrGreenGus

Painted lines on a road is NOT a safe cycle Lane

Here's a simple before n after from Melbourne to show how it's done

Over to you Bristol

Daniel Moser @_dmoser · Jul 30

Before Vs. After of a Cycling Lane transformation in Melbourne 🇦🇺

This 👇👇 is a great video that shows why paint is no infrastructure.

HT @MelbourneWay



243.4K views          0:14 / 0:38

6:17 AM · Aug 1, 2021 · Twitter for iPhone

# Drastic Reimagination of Our Cities
# - Brussels, Belgium

## Brussels
- Population: 1,208,542 (2019) [183]
- Area: 162 km² [184]
- Country: Belgium, Europe
- Major Lockdowns: March 2020 to May 2020; October 2020 to April 2021 [185]
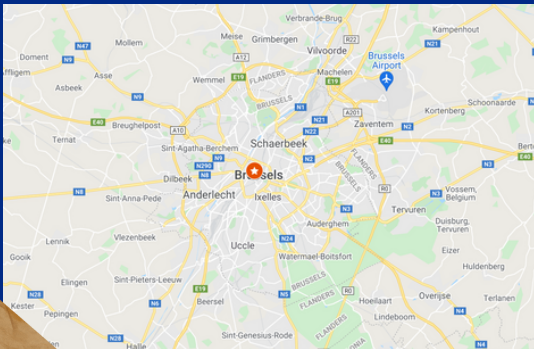


emissions, is responsible for around 1,000 premature deaths every year in the city [187].



## Introduction

Greater Brussels consists of 19 communes or municipalities. The largest commune, named the City of Brussels, is Belgium's capital. It also contains the historic centre and the "European Quarter," where the institutions of the European Union (EU) are located.

Brussels has long sought to tackle traffic congestion, road safety and air pollution. The city's infrastructure was originally designed for motor vehicle use, and drivers spend on average 45 minutes in traffic per day [186]. Consequently, residents in Brussels have been exposed to illegal levels of nitrogen oxide (NOx) and particulate matter (PM) for a long time. Poor air quality, caused mainly by motor vehicle

## COVID Streetscape Response

The COVID-19 pandemic gave Brussels city officials a chance to drastically reimagine the city by encouraging active travel and changing the streets [188]. During the early stages of the pandemic, Brussels experienced a 42% decrease in motorised traffic [189]. In response to this, the City Council of the City of Brussels rapidly implemented changes to create car-free zones and cycle lanes. In parallel, the government of Greater Brussels offered technical and organisational support for local municipalities to implement similar schemes, which resulted in the following measures:

- On the same day that the national lockdown started in Belgium, on 18th March 2020, Philippe Close, mayor of Brussels City, announced that the Bois de la Cambre, a large public park, would be closed off to motor vehicles from the following day [190]. This measure created recreational space for thousands of residents, who used the car-free roads to walk, cycle, roller skate and more.

- In April 2020, Elke van de Brandt, Minister of Mobility of the Brussels Capital Region, announced a plan of 40 kilometres (24.8 miles) of pop-up cycle lane, funded through the Bikes in Brussels fund [191, 192]. A further 10 kilometres (6.2 miles) were planned in September 2020 [193].

- In May 2020, a pop-up cycle lane was implemented on Rue de la Loi, a four-lane car highway that provides connections between the European Quarter and the city's historical centre [194]. In just three days, this was transformed into a bi-directional cycle lane [195]. Additional cycle lanes were implemented throughout the city, for example, when a section of the E40 motorway between Diamant and Avenue des Communautés was converted into a cycle lane [196]. As for now, this is the widest cycle track in Brussels, with a width of up to 10 metres.

- The implementation of car-free zones and road closures using *corona-flowerpots*, acting as traffic filters by blocking cars and giving passage to cyclists and pedestrians [197]. The most famous example is on the Avenue Charles de Gaulle, along Ixelles Ponds [198].

- Some businesses also reported that the city offered to replace their car parking spaces with parklets and outdoor dining spaces for free [199]. These measures have supported more pedestrian and cyclist space around previously car-dominant parts of the city.

- Furthermore, in October 2020, following the implementation of these schemes, Brussels Mobility, the administration of the Brussels-Capital Region responsible for infrastructure, shared an online survey looking for feedback from residents on the new cycling infrastructure developed since the pandemic began [200].

## Outcomes

Brussels implemented its streetscape measures quickly and effectively, prioritising car-free zones and bicycle infrastructure. Despite the pace of these changes, residents have widely welcomed this. Outcomes of Brussels Mobility's survey showed that 65% of participants evaluated the changes positively, with less than 20% viewing it as negative [201].



Photo credit: European Cyclists' Federation (ECF)

## "Everyone has a bike now [...] I had one before the crisis, but now I use it every day"

- Diana, a Brussels resident queuing outside a bicycle repair shop [202]

Bicycle shops, like Velofixer, noted a fourfold increase in bicycle sales in the weeks after lockdown restrictions went into effect [203]. Similarly, Swapfiets, a bike renting company, went from 1,500 to 2,500 customers in two months during the first few months of the pandemic [204].

These anecdotal stories are also supported by traffic monitoring count analysis. Bicycle traffic increased by 64% from 2019 to 2020, whilst car use decreased by 20% [205].



Photo credit: BX1 Brussels

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crossriverpartnerhip.org  43

### Challenges

Despite many positive views, the changes seen in Brussels have been subject to some resistance from motor vehicle drivers and local politicians. The Bois de la Cambre was removed in summer 2021 due to a legal dispute with the mayor of the local municipality Uccle [206]. Moreover, the Rue de la Loi cycle lane has resulted in an uptick in threatening and aggressive behaviour by protesting drivers. Some cycle lane projects still attract opposition and controversy despite regular consultations and engagement with local drivers and cyclists [207].

### Future Strategy

As Belgium has planned to invest around €458 million for cycling infrastructure in its National Recovery and Resilience Plan, the future of cycling in Brussels looks brighter than ever [208]. Furthermore, these changes extend to walking projects, too. The city has recently approved the new experimental plans for the Place Royale redevelopment, soon to transform 80% of the entire square into a pedestrian zone [209]. The redevelopment shows Brussels commitment to radically reshape their city centre to respond to pedestrian and cyclists' needs.

### Reflections

Brussels' rapid move to reimagine its streets demonstrates how streetscape changes can be implemented quickly and effectively. Many of the city's larger schemes, such as the cycle lane on Rue de la Loi, were implemented within the first three months of the pandemic. Yet, despite this, they have been widely viewed as positive by Brussels Residents. A reflection for London is to be ambitious and to move more quickly with the rollout of its streetscape schemes. Moving at pace can sometimes help seize opportunities to deliver strategic aims. Nevertheless, following this up with regular consultations and engagement is essential to ensure that schemes are well received and that they meet the needs of residents and businesses.

### Learnings in Practice

Between March 2020 and March 2021, TfL and London boroughs delivered around 100km of new cycle routes, 88 Low Traffic Neighbourhoods, as well as hundreds of kilometres of new pedestrian spaces and new School Streets [210, 211].

# What do the public think?



David Zipper
@DavidZipper

Paris grabs the car-free headlines, but Brussels is making great strides as well.

Mark Wagenbuur @BicycleDutch · Oct 19
Finally saw and experienced the finished car free zone in the city centre of Brussels. What a joy! Just the huge sound difference alone... Video from my own archive compared to footage I shot last week.

▶ 68.7K views                    0:38 / 1:00 🔊 ⤢
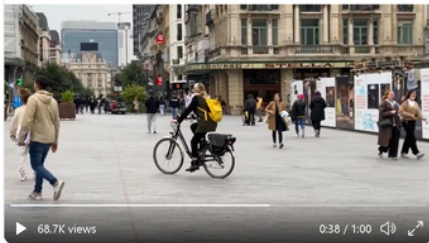
2:22 PM · Oct 19, 2021 · Twitter Web App

Heroes for Zero - Brussels
@HeroesforZero

The cycle path on Rue de la Loi is a big advance for road safety in #Brussels, but it's quickly becoming too small. Doubling its size would make sense.

(Film through @kwinlambrecht)

▶ 1.6K views                    0:04 / 0:12 🔊 ⤢
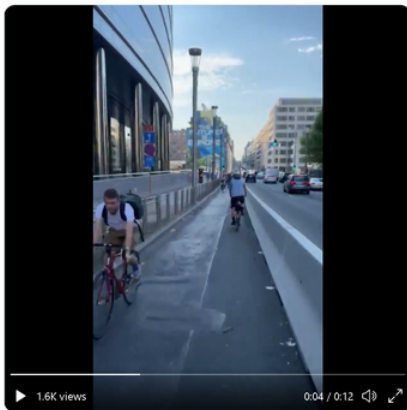
7:23 PM · Sep 15, 2020 · Twitter Web App

Sam Wilkin
@MrSamWilkin

Brussels still treats cycle infrastructure as secondary to car infrastructure. People park and dump stuff in cycle lanes whereas car lanes are respected. Attitudes need to change before it's a decent cycling city. More enforcement please, @zpz_polbru

Schaerbeek à vélo @VeloSchaerbeek · Nov 25
Where to put a container in #Carbeek...? Exactly.

10:19 AM · Nov 25, 2021 · Twitter Web App

Oliver Lord
@0jhl

Wow. The owner of this cafe in Brussels told me the city wrote to businesses OFFERING car parking for FREE to create magical streateries & parklets as covid support. No laborious regulations. He said its invaluable, great for business and will spark wider change in the area 🌿

👤 London Parklet Campaign

2:47 PM · Sep 3, 2021 · Twitter for Android

# 04 What can London learn?



The document has explored the streetscape responses of seven cities around the world due to COVID-19 and highlights some of the transformative ways they have 'reimagined' their streets.

Below we have compiled five key learnings from the case studies that can help Local Authorities and planners in London to continue delivering transformative and lasting change through streetscape schemes moving forward:

**(1)** **Push the Boundaries**
Be progressive when planning London's streets for pedestrians and cyclists. Seoul has shown us the opportunity to utilise technology, data, and "futuristic" concepts to find innovative solutions to complex problems. COVID-19 has demonstrated that rapid and ambitious transformations of cities, such as Brussels, are possible. With thorough consultations and engagement, acting quickly and effectively can contribute to a more sustainable future.

**(2)** **Strategy & Funding**
Cities have used COVID-19 as an opportunity to deliver sustainable changes to their urban areas that form part of their strategic aims and objectives. Bogotá's active travel infrastructure schemes, for example, will support the city's Bike Public Policy and investment plans in the next ten years, but this is rooted in strategic aims that have been present in the city's planning for 50 years through the *ciclovías*. In addition to linking to city and borough strategies, consider alternative and creative funding models, such as public-private partnerships, to create long-term sustainable change. Vanderbilt Avenue's Open Streets scheme in New York City has shown that a public-private partnership that invests time and money through creative forms of branding, sponsorship and ownership of the scheme has supported local businesses and created a widely encouraged scheme.

**3** **Evidence-Based Approach**

Decisions surrounding the implementation and management of streetscape interventions should be based on precise data and evidence. Brussels Mobility gathered helpful feedback through a city-wide survey that asked residents to rate the new streetscape changes. Consultations and other qualitative analysis, supported by quantitative traffic monitoring data, were used to understand active travel uptake and traffic levels. Melbourne, however, has not been able to gather any detailed data on their new Little Streets and cycle lane projects as any change identified is likely to be unrepresentative given the city's extensive series of strict lockdowns. It is, therefore, still not possible to assess the real success and outcomes of these streetscape schemes yet.

**4** **Raising Awareness for Safety**

Road safety is crucial to many of these projects. Educational and engagement programmes can be essential to address aggressive driving behaviours and road user conflicts, such as in Nairobi. The programmes are nationwide, with high-profile awareness-raising campaigns led by government bodies. Anticipating misuse and addressing potential hazards with safety in mind could help to prevent traffic collision incidents and inconsiderate behaviour.

**5** **Collaborate for Healthy Streets**

The cities mentioned have shown that the street is at the heart of economic, social, environmental, and public health challenges. Although the Healthy Streets Approach aims to address this, collaboration is also vital. New York's Vanderbilt Avenue Open Street scheme has been a great example of effective and successful cooperation between local authorities, businesses, and residents. Moreover, COVID-19 has highlighted the need to address public health as part of streetscape schemes and that street design can contribute directly to cultural changes. Encouraging collaboration on streetscape projects can lead to more innovation, efficient processes, increased success, and improved communication between all stakeholders.

# 05 Conclusion



Photo credit: Picture taken as part of CRP's Clean Air Day 2021 photo competition

The pandemic has resulted in abrupt changes to people's lifestyles and a renewed focus on sustainable, active travel. Consequently, in line with global net-zero strategies and the urgency of the current climate crisis, now more than ever, cities are presented with wide-ranging opportunities to implement innovative and ambitious streetscape changes as part of a more comprehensive COVID-19 response.

This report has explored how seven cities worldwide have responded to the COVID-19 crisis by re-prioritising road space for businesses and residents through differing and creative streetscape schemes. The Healthy Streets Approach sits at the heart of these interventions, highlighting the importance and benefits of achieving healthy, safe, and welcoming spaces in cities.

We have presented the outcomes, challenges, funding, and future strategies associated with streetscape schemes across the globe. By doing so, we want to inspire local authorities, business improvement districts, and private sector organisations to deliver initiatives that support making cities healthier, greener, safer, livelier, and more pleasant places to live and work.
We hope that this guidance document will be a helpful resource that can inform relevant stakeholders when creating sustainable streetscape designs both now and in the future.

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