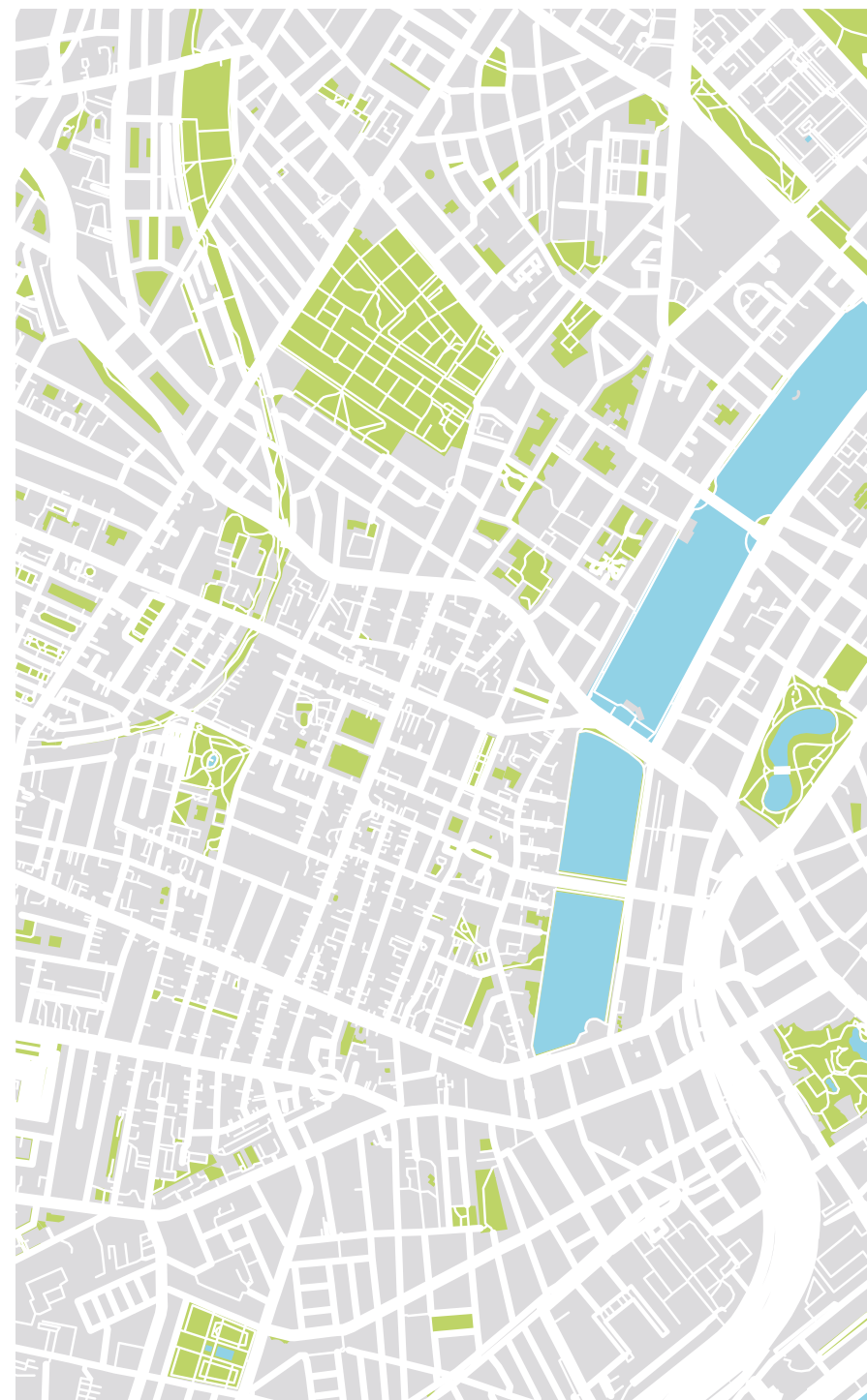


# Great places

and how to make them



## What we're thinking about

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## Begin at the beginning

We all recognise a great place when we see one, but it is less obvious why. Great places can be as large as a city or as small as a junction.

Everyone wants to live and work somewhere nice; a place of high quality. People will have their own ideas of what it means for somewhere to be 'nice' and 'good quality', but one thing is certain: it does not happen by accident. Creating a great place takes understanding, analysis and good design. At the outset, it requires a clear vision and input from many, and then a willingness and the resources to see delivery through. Maintaining its long-term appeal, meanwhile, takes a commitment to its upkeep.

If you are responsible for the public realm, whether it's an entire city or one street, creating and maintaining a pleasing environment can seem daunting. Where do you begin when it can seem like you need to change everything? This document is intended – in the very broadest terms – to show you how.

The following pages set out the things you need to put in place to transform your town, area or street. It takes a broadly linear approach, although in real life that is not always realistic. The only constant in a city is change. The ability to drive and direct that change over time is the goal, rather than to slavishly follow a process.

We illustrate the themes discussed in this document with a series of case studies that highlight what we consider to be best practice. It is both a 'how-to' guide and 'source book'; a starting point for good ideas that may act as inspiration for your own projects.

We hope this inspires you to create your own great places.

**Stuart Croucher**, technical director of urban design at Mott MacDonald



# Vision

## What's the big picture?

To effect real change, perhaps the single most important element is a clear vision of where you want your city to go or what you want it to become.

Successful examples of accidental or organic urbanism do exist, but they are rare and tend to have taken shape over time. The Old Town in Barcelona is one example; it was clearly never planned, and its qualities arise from that very fact. For every good example there are far too many poor ones, such as the slums of Mumbai or the roads that take priority in Los Angeles.

We can no longer rely on chance. In today's environment – with its many active agencies, each with their own priorities – a vision is vital. Without one, others such as housebuilders, will fill the void and impose their own ideas. These might not align with the city's overall wellbeing. The pressure to maximise profit can impinge on the quality and type of development.

It takes time to truly effect change, so you need to be able to sustain your ideas over the long term. Many of the overseas locations that UK cities aspire to mirror have taken decades to transform. To achieve long-term buy-in, the vision should not be overtly political or it risks being dumped with the next change of administration. Some of the most pro-cycling European cities did not specifically set out to be so.

Your vision can take many forms. It may be a specific goal, such as prioritising sustainable modes of travel or it may form a more general stance, such as a desire for a car-free city centre like those in Madrid, Hamburg and Oslo. Or perhaps it stems from a strong feeling to simply be more like somewhere else.

A vision and its buy-in tends to be ephemeral, the brainchild of a single well-placed individual. It should capture the imagination and be accessible. A balance must be struck between it being too drastic or utopian and suffering what might be described as 'death by committee' in trying to appeal widely. If different groups think the vision was their idea, so much the better.

It matters more that it exists and less where it originated.

“Make no little plans; they have no magic to stir men's blood.”

**Daniel Burnham**, American architect and urban designer





## Vauban

Having a clear vision can deliver a wholly different way of living and moving around. Vauban is a model sustainable urban district on the outskirts of Freiburg in Germany. Its streets are largely car free because parking spaces are located on the periphery of the site and the layout – mostly crescents and cul-de-sacs – acts to ‘filter out’ cars.

There is good public transport and a car club with around 2500 members. Residents who join the car club also receive a free, 12-month pass for all public transport in Freiburg. Almost half of Vauban’s households are ‘car free’.



## Copenhagen and Helsinki

Copenhagen pedestrianised Strøget, one of the main avenues through the city, in 1962. It has been a big success, influencing urban policy across the world. Strøget triggered a gradual process, which over the next five decades would see a shift away from cars and towards pedestrians and cyclists across the city. This included the piecemeal removal of parking spaces in the city centre. On its own, each withdrawal had little impact, but cumulatively, over years, the reduction in parking has created significant opportunities for other types of activity on the city's streets.

In Finland, Helsinki is seeking to remove the dominance of cars by making them less convenient compared with walking, cycling and using public transport. A journey planner app shows the different transport options, while city authorities are improving public transport, reducing the speed of cars and increasing space for pedestrians and cyclists.





## Amsterdam

Authorities in Amsterdam did not turn against cars because of a love of cycling, but rather to reduce the rising number of road traffic casualties – 400 children alone died in 1971. The elaborate network of cycle paths and lanes that now makes Amsterdam the cycling capital of Europe emerged from this desire for safer roads. Street hierarchy in the Netherlands is an important factor in improving safety and convenience for cyclists.

In urban areas like Amsterdam, roads are designed to limit opportunities for through vehicles but allow for unimpeded movement for those on bicycles. There are also extensive school cycle-training schemes, a widespread cycle network and extensive bicycle parking facilities.







## New York

If the political will is robust enough, change can happen relatively quickly. Although cyclists remain a small fraction of commuters in New York City, the 'Big Apple' has more people travelling to and from work by bike than any other American city. More than 46,000 workers commuted by bike in 2015, up from 15,000 in 2000.

Over the past decade, the overall length of New York's cycle routes has increased from 825km in 2006 to 1824km – 684km of which are protected bike lanes. City authorities have focused on bike safety as part of its Vision Zero campaign to eliminate traffic fatalities. They are committed to adding at least 80km of new lanes, including 16km of protected paths, each year.





# Policy

## A guide to delivery

So far so good. It's great to have a strong vision for your city, but turning it into reality requires action – often a great many. These may include placemaking interventions or public space transformations. Put simply, policies must be developed to deliver the vision and necessary changes, most obviously to leverage funds and political support.

All your policies must support the vision. If your ambition is to reduce car use, do not also back development that encourages low-density sprawl and requires people to use their cars. Rather, planning policy should support the kind of medium- to high-density development in locations where there is no need to drive.

A review of existing policies is a good place to start creating the infrastructure to deliver great places. In the absence of clear guidance about how to lay out your public space, you may find the highways department, for example, might continue to build more and newer versions of the type of streetscape you wish to get away from. Guidance on land use, development density expectations, streetscape design, cycling design standards, public space materials, and sustainability expectations can help officials deliver the kinds of places depicted in the vision.

“ A city that outdistances man's walking powers is a trap for man.

**Arnold Toynbee**, historian and philosopher

”





## Almere Poort

Almere Poort is a district of Almere, the newest city in the Netherlands. The local authority has a masterplan for the area, dividing it up into districts, each with several hundred plots varying in size from 86m<sup>2</sup> to more than 1200m<sup>2</sup>.

Individuals can purchase a plot and the buyer is free to customise their home from a wide variety of off-the-shelf designs. The project has proved popular, even against a background of depressed development nationally, and has attracted a wide diversity of people – from teenagers to people in their 70s as well as from different cultures.





## 100 Public Spaces, London

The Greater London Authority began its 100 Public Spaces programme in 2002. Although fewer than 100 were improved before the scheme was axed in 2008, it did trigger a change in attitudes to public space, including a recognition that all urban spaces in London, not just its parks and gardens, warrant good design.

100 Public Spaces was the precursor of similar programmes, including Great Spaces and the Great Outdoors Strategy, which have delivered a range of projects, from temporary interventions and community-led pocket parks to rejuvenated high streets and the transformation of places such as Trafalgar Square, Exhibition Road, Gillett Square and Windrush Square.





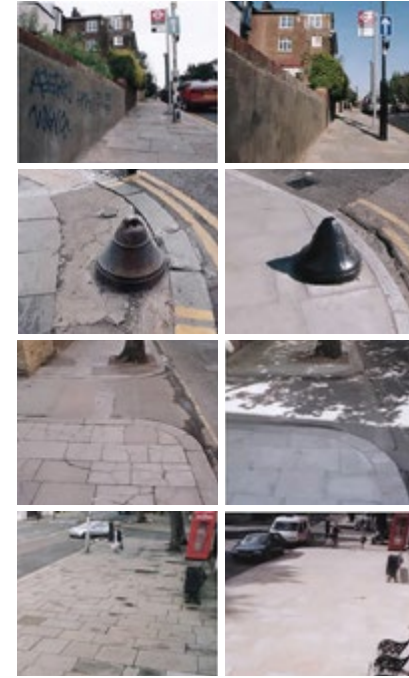
## Streets toolkit, Transport for London

Many cities publish guidance to assist in how changes are made to local streets, providing information for design professionals on technical requirements and acting as education and advocacy tools for members of the public. These guides can be invaluable in capturing the new vision for your city in the day-to-day delivery of street enhancements.

Transport for London (TfL) has produced a series of documents to help practitioners create high quality places, covering streetscape, cycling, sustainable urban drainage systems (SuDS), motorcycling, bus stops and roadside loading. Together, these documents form a powerful tool to guide and structure ongoing changes in London, ensuring a broadly consistent standard of delivery on the capital's streets. They are supplemented by local guidance from London boroughs.







## Camden, London

The Camden Council Boulevards Project was designed to make the streets of the north London borough more attractive through better cleaning, design, enforcement and lighting, and to upgrade roads and pavements and keep them in a good state of repair. A key feature of the policy was to stop replacing like-for-like when undertaking highways maintenance but to replace to a higher standard, and then establish a continental cleansing system to keep it looking good – washing, not just sweeping. A stronger paving, known as the Camden Slab, was developed to withstand the cleansing regime. It was slowly rolled out across the borough.

Although the upgrades were more expensive than simple replacement, longer term impacts were positive. Graffiti and bill posting declined and claims for trips and falls – previously costing some £10,000 a street – dropped to almost zero.



# Analyse

## Get to really know a place

### **Before trying to improve your city, make sure you thoroughly understand it**

With very few exceptions, cities have been here for a long time and will continue to be so, many continuing to grow. Changes to a city, or part of it, should be regarded as a long-term investment and likely to stay in place for many years. In that light, any public realm intervention, big or small, could be considered a risk. If it makes things worse in some way, it could be a long time before it is fixed.

There are many towns around the UK suffering buyer's remorse over a previous project. Almost from day one, public attitudes towards the modernist housing schemes implemented on the outskirts of UK cities after World War II were negative. Yet many of them still exist, and still suffer the same problems as when they were first built.

### **Avoiding negative impacts**

Most interventions nowadays are not on the same scale, but errors on smaller projects can still have a negative impact. Connector roads built with no footways because the developer at the time did not envisage anyone wanting to walk, and the planning authority did not have either the policies or the will to refuse, can effectively isolate a community from jobs and services. Similarly, junctions that only consider traffic can create safety problems for other road users.

To protect against large or small missteps, you must have a forensic understanding of the possible outcomes – by which we mean you need to thoroughly analyse the planned intervention, whether it is a new zebra crossing or a large-scale urban extension, and base your decision on the evidence.

Systematic questioning of the planners, developers and designers will uncover the right information and lead to better, more-informed interventions.

### **Discovering the real world**

Proper analysis can sometimes lead to surprising findings, which can change perceptions about how we operate in public and how we should therefore design. It was a long-held belief, and one that still prevails in some quarters, that public seating is not required in busy locations as the environment would be too unpleasant for people to sit in.

A survey of Tottenham Court Road found a very different picture. Rather than discovering a lack of demand for seating, people were trying to perch on any piece of horizontal space they could find. This came as a surprise and subsequently changed plans for the area and at other places since.

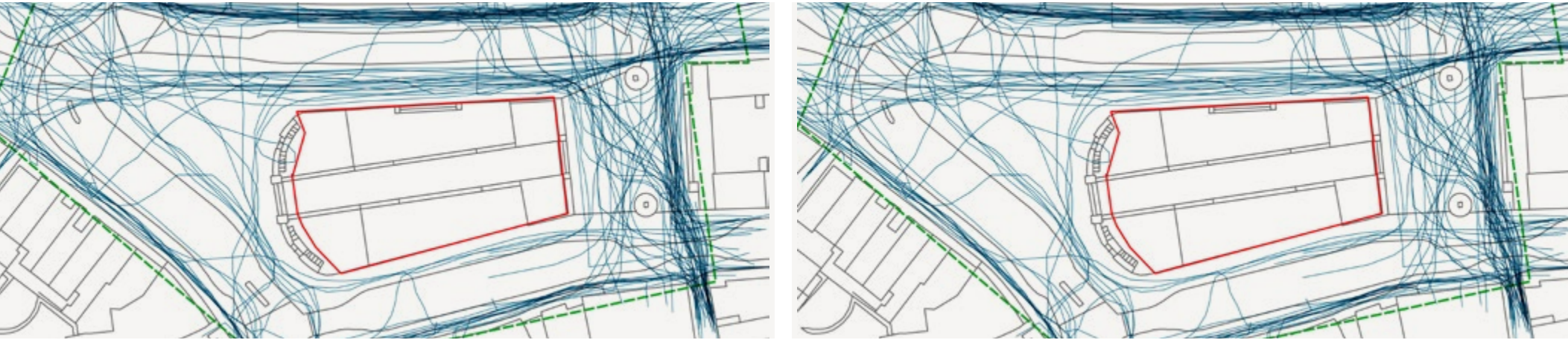
More prosaically, we all know of public parks where the paths were planned based on a preconceived notion of how people would use the space, or perhaps because they looked nice in the plan. What then happens is that people using the park develop their own routes, and the grass gets worn in these areas, while the paths that looked so good in the plan remain unused. If the park is new, there might be no pre-existing use to survey and analyse. In that case, perhaps it would be better to open the park and let the users establish where the routes should be.

### **More than modelling traffic**

Much of the above sounds like a statement of the obvious, but it is remarkable how much money gets spent based on little or no actual evidence. Even when analysis is undertaken, too often it consists of just traffic modelling, with other users essentially ignored. Indeed, UK street design process was, until recently, based on the Department for Transport's Design Manual for Roads and Bridges. This contained many standards that were backed by little or no analysis, and the document has had a detrimental effect on urban streets in the UK for decades.

Don't make the same mistake. Minimise the risks to your city by taking the time to analyse.





## Nottingham

Old Market Square in Nottingham was redeveloped in 2007 to better reflect the city's aspirations and to be a catalyst for change. Detailed pedestrian analysis by landscape architects Gustafon Porter + Bowman, with help from spatial layout specialists Space Syntax, informed the design. It demonstrated that the previous layout did not cater for peoples' desire lines – usually the shortest or most easily navigated route to their destination. The analysis ensures the redeveloped square is used by those wishing to spend time there as well as those passing through.



## Tactical urbanism, Philadelphia

Informal analysis can help identify the best way forward. Tactical urbanists – who seek change through the demonstration of low-cost, temporary measures – have been calling for pedestrian improvements in the US using a principle known as ‘sneckdowns’. The term is a combination of snow and neckdown – the latter being a US name for footway buildout. Sneckdowns can be identified after snowfall when drivers’ tyre marks delineate their required space for travel, with the untouched snow showing the space available for other uses, such as footways or cycle lanes. It is a similar principle to letting worn grass determine where paths in a park should be placed.

In some places, city planners have used sneckdowns to implement permanent changes. In Philadelphia, they became the basis for pedestrian upgrades at Baltimore and 48th Street in the University City District.

Tactical urbanism can also inform analysis by ‘testing’ proposals, as in New York where temporary treatments in Times Square were made permanent after proving popular.







# Engagement

Involving the  
community

“Cities have the capability of  
providing something for everybody,  
only because, and only when, they  
are created by everybody.”

**Jane Jacobs**, *The Death and Life of American Cities*

“What is the  
city but the  
people.”

**William Shakespeare**, *Coriolanus*

Places are only great if they succeed for everyone, not just the few. Proposals must always be backed by the local community.

A city's public realm defines how its citizens connect with each other and their neighbourhoods. The spaces between buildings can shape how people behave. Does it encourage them to get active, or help curtail crime and make them feel safe?

To ensure that your city's public realm can fulfil its social, economic, cultural and environmental potential, the community needs to help shape the process through which it is designed and managed. Creating a great place involves more than including diverse perspectives in the development process. It can only be considered great if the benefits are shared – by the young and old, ethnic minorities, those with disabilities and people from deprived neighbourhoods.

Thinking about the end user requires a mapping exercise to understand who to speak with and how to identify so-called hard to reach groups. User-centred research will help city authorities gain empathy for the people they are designing for. Co-creation will enable the end-user to input into the design and policy process, increasing the chances of getting the place right. In this inclusive, user-centred model, planners and citizens become jointly responsible for decisions, helping to ensure public ownership of a place is inbuilt from the start.





Dept of Housing Preservation and Development / Courbanize



## Case studies

### Brownsville, New York

Without a detailed understanding of where people live, what their lives are like, their economic circumstances, and whether local services are effective, it is impossible to create places that can truly serve the whole community.

The New York neighbourhood of Brownsville in Brooklyn sought to understand what people felt was missing as a way of helping to design new services. The Department of Housing Preservation and Development put up signs all over the area asking residents to text their thoughts about what they would like to see more of or what needed improvement. Texts made it easier for people to participate, particularly those who might not be able to attend community events, lowering the barrier to entry and bringing more voices to the placemaking process.





## Beat the Street, Thurrock

Playful initiatives can lead to meaningful change. In Thurrock, the Beat the Street initiative challenged school children to walk the distance around the world using 106 beat boxes, strategically placed to encourage them to explore paths and parks in their local area or on their way to school. The boxes recorded their walks. In this car-centric Essex town, 87% of the 8500 participants walked more than usual and said they will continue to walk more in the future. Across the UK, Ireland and Austria more than 300,000 people took part in 19 Beat the Street programmes in 2017, including 42,000 in East Sussex.





## Paris

Going beyond consultation and including the public in deciding the design of infrastructure and placemaking initiatives from their outset can help ensure the benefits are felt by everyone.

In Paris, participatory urbanism has been incrementally developing as an approach to planning. In 2014, the city authority earmarked 5% of its investment budget for public projects, and the following year it started using crowdsourcing to generate ideas from residents. Some 5000 entries were received and 58,000 citizens cast their votes on the most popular. In 2016, 158,000 Parisians voted on how to spend €100M.







## Hello Lamp Post, Bristol

Bristol is one of several cities that has implemented a scheme to enable citizens to engage with the city authorities through otherwise unnoticed objects, from lamp posts and bus shelters to parking meters and post boxes. The initiative, Hello Lamp Post, enables people to 'wake up' street furniture, prompting a set of carefully crafted questions about what they are doing and how they feel about where they live, work and travel.

Bristol was the first city to use the interactive system, generating 25,000 messages over eight weeks in 2013. It has since been used in Astana, (Kazakhstan), Austin (Texas), Bordeaux (France), Malmö (Sweden) and Singapore.



# Placemaking

## Big and small interventions

Having set out an inspiring vision, put the structuring policies in place, analysed the plans, and engaged with local communities, the core work of creating a great place remains the various interventions that fall under the banner of placemaking. These might occur at a macro or micro level. Masterplanning of a new city district is an example of macro placemaking, while a micro intervention might be the creation of a pocket park, or a redesigned street or interchange.

Cities such as Barcelona and Copenhagen have achieved a reputation as being great places for their citizens. Each is regularly at or near the top of league tables for the best places to live. Whatever the merits of these tables, there is no doubt both cities are highly thought of and their consistently high ranking reflects well on their financial and social performance. One of the things they have in common is the high degree of importance the authorities place on the appearance and function of the public realm. A key measure of liveability is the availability and quality of public and green space. There are good reasons for this. People will congregate in such places and this has enormous benefits, including reducing crime and anti-social behaviour, and increasing the value of adjacent development.

The creation of great places does not entail huge expense. Good design can accommodate a limited budget. Many of the world's favourite locations have been designed using relatively inexpensive materials. Taken together, placemaking can improve people's lives in ways that go far beyond the original narrow goals of one scheme. Kings Cross, the Champs Elysees and New Road in Brighton are good examples, while plans for Varanasi rail station could be a blueprint for transforming city areas across India.

“I truly believe that if you can change the street, you can change the world.”

**Janette Sadik-Khan**, New York City  
Department of Transportation commissioner

“What attracts people most, it would appear, is other people.”

**William H Whyte**, The Social  
Life of Small Urban Spaces





## Kings Cross, London

Masterplanning can achieve great change through improvements for a district, a neighbourhood or even a whole new town. The regeneration of the Kings Cross area in London is a good example.

The decision in 1996 to move London's Channel Tunnel Rail Link to St Pancras provided the stimulus for regeneration of the run-down area, creating a new high-density part of London where people could both live and work. The masterplan set out a unified physical layout for the site and ensured users are never far from open spaces, which make up about 40% of the area. It has been instrumental in attracting high-quality tenants such as the University of the Arts London, Google and Universal Music.





## Varanasi

Varanasi in India has a population of about 1.6M. The possibility of upgrading the city's rail station, paid for by realising the value of the land surrounding it, has been established through a combination of station design and masterplanning. The concept includes preliminary proposals for the station building, produced by John McAslan and Partners, and demonstrates the viability of funding those improvements with context-sensitive development of adjacent railway lands. It is also an opportunity to create a new neighbourhood in the city, with properly functioning utilities, safe footways, pleasant public spaces and extensive tree planting.

Varanasi can be considered a proxy for railways across India, so if this concept can be replicated, the potential for transformational change across the sub-continent exists, benefiting many millions of people.





## Champs-Élysées, Paris

There are some good examples of transformational change at street level, many the result of thinking about streets as more than a conduit for cars.

The Champs-Élysées is one of the most iconic streets in the world. It underwent a major re-design in 1994 to reduce car dominance and improve the pedestrian experience. The side lanes for local access were essentially removed, with access restricted to use of new underground car parks. These allowed surface parking to be removed, and the space created given over to pedestrian zones. New planting helped to reinforce shelter from the remaining central traffic.







## New Road, Brighton

New Road, Brighton, lies at the heart of the city's tourist area, adjacent to the Royal Pavilion and close to the seafront and the North Laines. To address problems, including traffic, parking and anti-social behaviour, a radical transformation was implemented. It reinforces pedestrian priority without pedestrianisation, with vehicles allowed only at very low speeds.

Traffic levels have dropped by 93%, while the number of cyclists and pedestrians has increased by 22% and 162% respectively. There has also been a remarkable 600% increase in what might be described as 'lingering activities' – people just enjoying the area.



“I thought cars were the dominant lifeform.”

**Ford Prefect** in *The Hitchhikers Guide to the Galaxy* by Douglas Adams





## San Francisco

In 2005, a bench, a tree and some grass were placed for two hours in a parking bay in San Francisco. This symbolic act spread to more than 80 cities around the globe. Since their conception, Parklets have taken various forms – from public seating, cycle parking, miniature green spaces or extensions of cafes – adjusting and responding to their surroundings, and the communities that use them.

The Californian city also hosts an annual PARK(ing) Day, where designers, residents and artists work together to turn parking spaces into temporary gardens, libraries, yoga studios, places to sit, eat and drink, skate parks or event spaces.

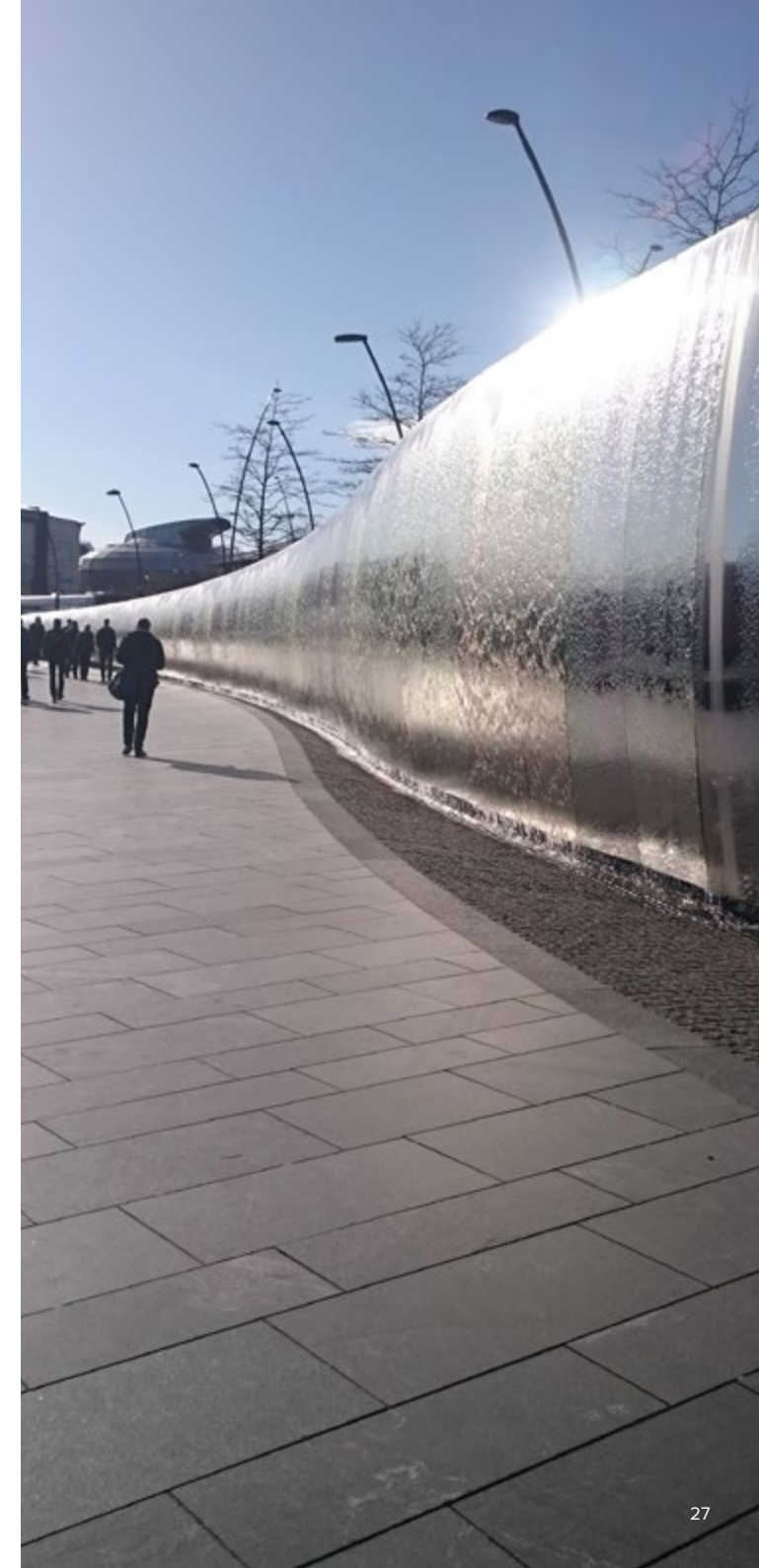




## Sheffield Station

Rail stations are increasingly applying placemaking principles, extending development to enhance the public realm outside and adjacent to station buildings.

The £13M refurbishment of Sheffield Station provided an opportunity to improve the surrounding area, known as Sheaf Square, which had been dominated by a large traffic roundabout. A new sculpture, the Cutting Edge, an 81m-long blade of polished stainless steel and glass with feature lighting, was installed. It defines a clear and unobstructed pedestrian route towards the city, and is part of a series of connected streets and spaces known as the Gold Route.





## Parque de la Solidaritat, Barcelona

Access to green space and landscapes makes people happier and healthier. A US study revealed that planting an additional 10 trees on a block would boost by 1% how healthy residents feel – equivalent to making them seven years younger. Creating good-quality green spaces and giving people easy access to them is a cost-effective way of improving their lives.

In Barcelona, the Parque de la Solidaritat achieves both goals. The 4000m<sup>2</sup> public space is built over a motorway and connects two communities. In its centre is a wide pedestrian path with good lighting that links into the existing urban fabric on each side of the road. The park's leisure facilities, including playgrounds, basketball courts and petanque courts, are located in a series of outdoor 'rooms' on graded platforms. It is so popular it has been replicated elsewhere in Barcelona.







## London

Several London boroughs have enhanced pedestrian priority by installing artistic crossing points. Transport for London, which backed the installation on Southwark Street in Bankside (top), says the artistic crossings can change people's perceptions and use of junctions, and bring a street to life.

Elsewhere, including India and Iceland, crossings have been painted to appear like a 3D roadblock, with stripes seemingly floating in mid-air. The aim is to force drivers to pay more attention and thereby reduce accidents.







## Wapping, London

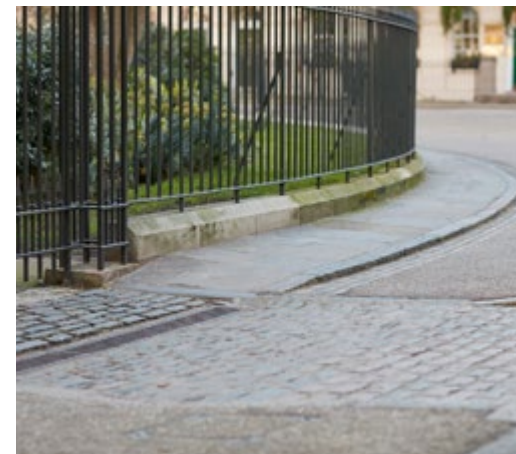
Good landscaping can make a virtue out of a necessity. The Thames Tideway Tunnel is a major new sewer under the UK capital to protect the tidal River Thames from pollution. Along the route of the 25km tunnel, a series of large interception shafts will be constructed to connect it to the surface. At Wapping in Tower Hamlets, the shaft will be enclosed by a large new foreshore structure in King Edward VII Memorial Park, designed to hide the shaft and extend the public space.



## Fitzroy Square, London

Sometimes improvements can be made by simply improving the materials used, providing more and better planting, or by taking things away – decluttering or guardrail removal. Fitzroy Square was completed in 1835 and is one of London's finest Georgian squares. In 2008, Camden Council implemented improvements designed to create a space reminiscent of its Georgian grandeur.

At a practical level, the project reduced traffic and created a pedestrian-friendly space, removing almost 130 bollards and installing wider, higher-quality footways. However, the genius of the scheme – also implemented at nearby Bedford Square – was to use modern materials to reflect the Georgian layout. These needed to be robust enough to cope with modern day demands but similar in appearance to the original materials.





# Sustainability

## Future-proofing urban spaces

“Don't blow it – good planets are hard to find.”

Time magazine

Increasingly, the long-term effects of climate change are having an unavoidable impact on our lives. A great place will only remain great if it can accommodate the world as it changes, whether that is due to climate change or other stresses. After all, one would expect any significant intervention to be around for some time.

Embedding sustainability in a way that pays more than lip-service to the concept is critical in creating a great place. This could mean ensuring that pedestrians and cyclists are prioritised instead of car drivers, materials are sourced sustainably, drainage is installed that minimises runoff, or the design is flexible and robust enough to ensure a long lifespan.

The effects of global warming combined with an ongoing increase in urbanisation are creating pressures on our planet, particularly to our cities. About 4bn people worldwide currently live in urban areas, but by 2030 this number is expected to be more than 5bn, or 60% of the world's population. The Paris climate agreement set targets for reducing greenhouse gas emissions and to limit global warming to no more than 2°C above pre-industrial revolution levels.

### **Adaptable, greener and healthier**

It is crucial we adapt the way we design cities to respond to these challenges, from large-scale masterplanning to street-scale interventions. Our urban spaces must be able to cope with ongoing stresses, such as growing populations, maintaining a quality of life for inhabitants amid rising temperatures, and the potential shocks of large-scale disasters, such as flooding and extreme weather.

The challenges of urbanisation and global warming should be seen not purely as threats but as an opportunity to create greener, more flexible and positive urban environments for the billions of people who live in them. Cities have the potential to complement solutions for limiting the scale of climate change by sharing resources, increasing efficiencies and supporting cleaner forms of transport. In numerous places, there are already changes happening for the better.



## Adaptable

The frequency and impact of floods and extreme weather events is rising globally. The consequences of not embedding resilience into urban schemes were seen in the catastrophic damage caused by hurricanes Florence and Michael in 2018. Flooding is a major risk in parts of the UK. Nine people lost their lives during the floods of 2012 and the cost of damage to property and infrastructure was estimated to be £1bn. To protect cities from flooding, there are three recognised forms of defence: protection – building physical flood defences; adaptation – creating ways to absorb water; and retreat – removing development from areas at high risk of flooding to create a buffer to protect other areas.

## New York

New York is vulnerable to coastal flooding, so a series of dykes and concrete walls has been proposed to provide a protective ribbon in southern Manhattan. As well as protecting the area, concrete walls will double as seating, bicycle shelters or skateboard ramps, while the dykes also serve as new green areas, creating public parks. Known as the Dryline, the proposal creates 12km of waterfront protection and new public amenities.





## HafenCity, Hamburg

HafenCity in Hamburg has taken the adaptation approach. It is an island in the Norderelbe River, a mere 4.5m above sea level. Rather than building purely protective measures such as flood walls or dykes, which would have removed potential public space on the river front, a new promenade was built that can be flooded when waters rise to dangerous levels. Entrances and shops on the promenade have reinforced doors that can easily be closed if flooding is imminent. So instead of potentially being sacrificed to control water levels, the area now boasts a high-quality public amenity that is open for most of the year.





## Hayes, London

Managing and sustainably dispersing water should be included in schemes of all scales. Proposals to upgrade Hayes & Harlington Station in west London for Crossrail include improvements to the surrounding public realm.

A new town square will incorporate a sustainable urban drainage system (SuDS). Contrary to popular belief, SuDS do not necessarily require large or complicated engineering infrastructure. Sometimes, all that is required is permeable material, such as self-binding gravel, which can allow rainwater to soak into the land rather than being captured wholly by the drains.







## Greener

Green spaces in cities have several benefits. These include: improving users' quality of life, forming spaces for social and health activities, boosting air quality, providing natural habitat for wildlife, and increasing the level of natural drainage.

## Singapore

By global standards, London already has a substantial number of green areas. About 38% of Greater London is designated as open green spaces. Singapore has even more, with 47% of its land mass being green spaces. The island country has also developed innovative ways of linking them together.

The Southern Ridges walkway connects separate areas of green space via a series of pedestrian bridges. They allow people to walk for 10km without having to cross a road.







## Cheonggyecheon stream, Seoul

In the South Korean capital, Seoul, 4.8km of river that used to bisect the city has been uncovered and elevated expressways demolished. Known as the heonggyecheon stream, it provides flood protection for a 200-year level event. But that is not the only benefit. The ecosystem along the Cheonggyecheon has been greatly enriched – the number of fish and bird species has multiplied by a factor of six, and insect species by a factor of 12. Small particle air pollution has almost halved, and summer temperatures are 3-6°C cooler.

Although the Cheonggyecheon stream does not score highly for environmental sustainability – it is artificial and most of the water in the river is pumped there – it is wildly popular, attracting more than 60,000 visitors daily who contribute about US\$2M to the local economy. More remarkably, the price of land near the stream has increased 50% faster than in downtown Seoul.



## Healthier

The way cities are designed can encourage healthier lifestyles. Creating urban spaces that make it easier for people to cycle and walk rather than drive has two major health benefits: physical activity improves overall health and reduces the risk of developing several diseases, while reducing the number of vehicles on the road will cut air pollution, which in the UK contributes to about 40,000 early deaths each year. Streets and public spaces should be comfortable and safe for everyone to use whatever their age and level of mobility, with the equilibrium shifted towards those who are the most vulnerable.

### Queen Elizabeth Olympic Park, London

Proposals for the Queen Elizabeth Olympic Park in east London aim to rejuvenate what is currently a wide street, which was designed for transport during the 2012 Olympic and Paralympic games. Vehicle numbers are now much lower, so there is an opportunity to reduce space taken up by roads and widen footways and cycle paths.



“When I see an adult on a bicycle, I do not despair for the future of the human race.”

**HG Wells**



## Lewes Road, Brighton

The Lewes Road cycle scheme in Brighton has been widely celebrated as an exemplar for its pioneering and innovative use of 14 'floating' bus stops with dedicated cycle lanes passing behind, and the introduction of traffic signals that prioritise cyclists.

The scheme, which has won multiple awards, involved converting a busy 4.5km urban dual carriageway into a single lane road to accommodate the cycle facilities and bus lanes. The floating stops, with the bus shelters located on an island, were the first of their kind in the UK.







## Cycle park, Cambridge

Outside Cambridge rail station there are cycle parking facilities for 2850 bikes. Despite being the largest cycle parking facility in the UK, it is unobtrusively located in a building that also contains a 231-room hotel, a restaurant and ground floor retail units.

Known officially as Two Station Square, the development solved the problem of multiple bicycles obstructing the main square and the station entrance, while creating significant additional cycle parking spaces.





# Monitor

## Prove the benefits

Finally, it is important to set aside some time and budget for monitoring your changes. There are bound to be some who will oppose the delivery of your vision – people philosophically opposed to the direction you are taking the city or perhaps just uncomfortable with change of any kind. They can often be swayed by facts, however.

Continuing opposition to the changes in New Road, Brighton, was largely dispelled by the fact that pedestrian numbers in the first year of conversion increased by 62%, while the number of people spending time there climbed more than 600%. New Road is now wildly popular, although, without monitoring, the general perception of it might have been very different.

What should be monitored will depend on the project, and careful thought should be given at an early stage of a scheme to what it is trying to achieve: whether it is a new neighbourhood, a better arrival experience for rail passengers, a safer pedestrian crossing or whatever. It will be obvious what to monitor on some projects – for example, did the supposedly safer junction result in a reduction in casualties?

Things typically monitored might include pedestrian numbers, journey times (by one or more modes), street activity, retail occupancy numbers and crime figures. The list is endless, but two clear points are key: that the correct activity is measured in the right way, and ‘before’ monitoring is included in the assessment.

This last point, pre-development monitoring, is regularly overlooked. But it is vital. Government and other sources of finance are often linked to your ability to demonstrate the benefits of past funding. It is very hard to provide evidence if no pre-intervention monitoring took place.

It can often be difficult to monitor before a scheme, particularly if funding, as is often the case, is only awarded yearly. Nevertheless, this is a case of more thought at an early stage bearing long-term value.

Do not assume you’ve improved things, prove it.





# Final thoughts

This document is intended to act as a broad-brush road map for delivering improvements in your city. In truth, circumstances are likely to be more nuanced and detailed than described in these pages – for example, there has been very little discussion about funding, without which very little can be achieved.

We have already hinted that the process of transforming a city (or town, or neighbourhood or even street) will not be linear, but it is worth reinforcing the point that in delivering a project you will undoubtedly suffer setbacks, delays and, sometimes, defeats. Most of the case studies highlighted looked unlikely at some point. However, with enough of the elements described here in place, they were delivered. And we, as users of those places, are better off for it.



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Architects/consultants/designers

p9 **Almere Poort** – Designer(s)/Architect(s) Teun Koolhaas, Alle Hosper  
p10 **100 Public Spaces, London** (project by GLA & Mayor of London) – Mayor of London/Greater London Authority  
p14 **Nottingham** – Landscape architect: Gustafson Porter + Bowman. Analysis: Space Syntax  
p15 **Times Square, NY** – Designer: Snøhetta  
p18 **Beat the Street, Thurrock** – Consultants: Mott MacDonald  
p20 **Bristol, Hello Lamp Post** – Designer: Pan Studio  
p22 **Kings Cross, London** – Masterplanner: Allies and Morrison  
p23 **Varanasi, India** – Architect: John McAslan + Partners. Masterplanner: Mott MacDonald  
p24 **Champs-Élysées, Paris** – Architect: Bernard Huet  
p25 **New Road, Brighton** – Landscape architect: Landscape Projects  
p28 **Parque de la Solidaritat, Barcelona** – Architect: Sergio Godia  
p29 **London crossings** – Sponsor: Transport for London  
p30 **Wapping, London** (Thames Valley Tideway sewer in East London) – Landscape architect: Mott MacDonald  
p31 **Fitzroy Square, London** (Camden Council) – Client: London Borough of Camden  
p33 **New York Dryline** – Architect: Bjarke Ingels Group  
p35 **Hayes, London** – Designer: Urban Movement/Mott MacDonald  
p37 **Cheonggyecheon Stream, Seoul** – Designer: SeoAhn Total Landscape  
p39 **Lewes Road, Brighton** – Designer: Mott MacDonald  
p40 **Cycle Park, Cambridge** – Architect: Formation Architects



# Opening opportunities with connected thinking.

If you would like to discuss any of the ideas contained within this document, or if we can help you in any way associated with the processes contained here, please talk to us.

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