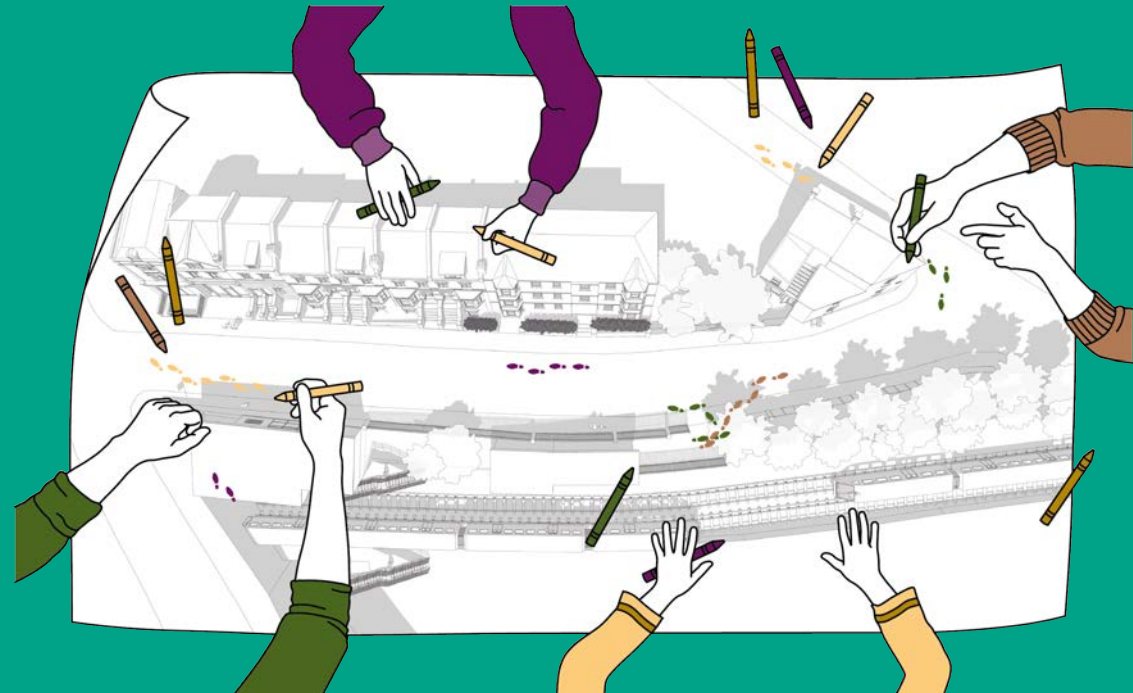




# Hannen Road Futures

A guide to Sustainable Drainage Systems (SuDS) and Co-Design for the transformation of a London street.

Sign up here to join the workshops:



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# Introduction

The purpose of Big Shift road closure days is to celebrate neighbourhoods by freeing up our streets for socialising and play, and giving over much-used roads to pedestrians. We are taking advantage of Lambeth's Big Shift programme to close the road for one single day and ask you the same questions we are asking ourselves: how can Hannen Road have a Sustainable Drainage System (SuDS) installed and, in the process, become an

improved street with a stronger and more playful public space that improves the natural environment?

The Big Shift Road closure will be a day of celebration and collective activities on the road. There will be a series of activities and 'slow zones' to imagine how Hannen Road could look and function if it was redesigned with the aim of improving the environment.

## Who is invited?

We are inviting all local residents of Hannen Road, and residents of West Norwood generally, to come and participate on this single day of community engagement. We want to co-design the street collectively and hear your ideas about how we can improve Hannen Road.

## West Norwood Station



### Why Hannen Road?

Hannen Road is the step-free arrival to West Norwood from the train station, so this street is busy at certain times of the day, but we don't often have the opportunity or reason to stop and enjoy its potential. This is true for many of the high-street roads and public spaces.

This road has beautiful mature trees, it takes us up to Knights Hill and down to Norwood High Street, it has a gentle slope giving it an interesting topography and it is the main arrival into West Norwood from the train station. The local area has also been found to be one of the most suitable locations for SuDS to help improve the borough's ability to adapt to climate change.

### Hannen Road usually looks empty and underused...

This is such a busy street! There are times throughout the day when the street is flooded with commuters and schoolchildren who use this step free access to the station.

## Hannan Road, West Norwood



### What is the potential of Hannan Road?

One way of improving drainage of surface water is by re-paving the street with 'permeable paving' and installing a Sustainable Drainage System (SuDS) under the road. This means cars would still be able to access and park on Hannan Road.

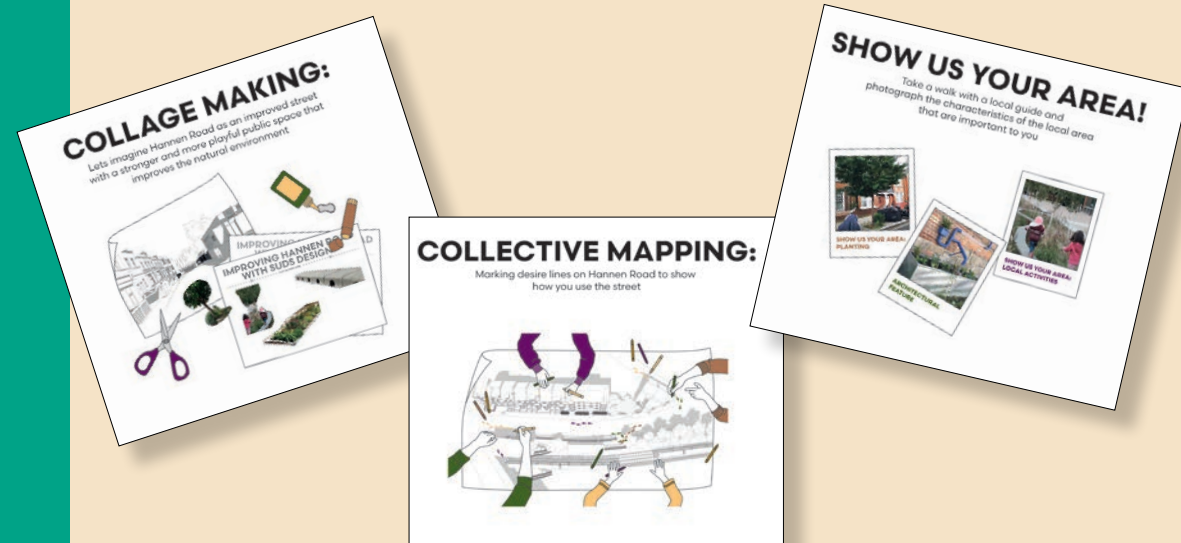
However, there are more ways of installing SuDS and many of the other ways are more beautiful and imaginative. Why? Because other solutions can create spaces to play, areas for relaxation, more planting, open water gardens and they even lead to increase of birds, bees, bats and a greater biodiversity. We are working together as a partnership to ask the local community the type of SuDS system they would prefer and where they could go.

### Are we planning to close the road?

No. Lambeth is looking at ways to improve drainage of surface water across different areas in Lambeth as part of its action on climate change.

# This sounds technical and boring- how exactly can I participate?

It isn't technical and it isn't boring! We are working as a partnership and together we can offer guidance and support to co-design the space. We have a mixed set of skills and so do you, so please join.



As a team we believe that SuDS would make a better contribution to the local environment and community if they were designed, developed and even managed by a group of local residents. Our team and skills include:

## The Local Authority

Lambeth Council represents the Local Authority and has the finance in place for road improvement, and the strong desire to make a scheme in collaboration with residents.

## The local BID

Station to Station BID represents local business between West Norwood and Tulse Hill and supports business needs (including the need for parking and facilitating deliveries) as well as improving footfall and the local area's street appeal.

## A micro SME business

A Small Studio is a local architecture practice based in West Norwood that likes to think global and act local which is why it sees much potential on Hannen Road. The studio is technically equipped to design public realm, but on this occasion it wants to work with the local community to turn blue-sky thinking into reality.

## An Academic institution

University of Greenwich has London's leading Landscape Architecture and Urbanism school and knows the technical and social benefits of SUDS through years of faculty research and working with students. They are supporting the team with their technical knowledge and experience of co-designing.

# Sustainable Urban Drainage (SuDS)

## What are SuDS?

### Drainage

Rainfall is part of a bigger system called the water cycle. This is the way water moves through our landscape and atmosphere: from rainfall to rivers to evaporation and back to rainfall.

In the past we have intervened in this natural cycle to remove rainfall from streets, houses and parks as quickly as possible by channelling it directly into underground pipes – this is what we mean by a traditional drainage system.

## Ever wondered where the rain goes?

Drainage! All the extra rainwater that isn't evaporated or infiltrated is usually channelled into a hidden system of pipes beneath our feet. SuDS tries to make this system more sustainable.

## South London Floods August 2022



### Between flooded streets and polluted rivers

The limitations of traditional drainage systems have become increasingly apparent in recent years for two main reasons: flooding and pollution.

Increased urbanisation has led to more surfaces becoming impermeable. In London it has been estimated that up two-thirds of our front gardens have been paved over for example. This means that the quantity and speed of water entering into the drains has increased. Intense rainfall leads to flash floods downstream from the paved surfaces, as we saw across south London in July 2021.

Another unintended consequence of traditional drainage systems has been the release of sewage directly into our rivers. How has this happened? The problem is that when storm water drainage reaches capacity after heavy rainfall it overflows into the sewage system, mixing with the effluent and then getting released to the rivers via outfalls, formally known as Combined Sewer Overflows (CSOs). In Lambeth this water outflows into the Thames via the Brixton Storm Relief Sewer outfall at Vauxhall Bridge. Yuck!

### Brixton Storm Relief Sewer



### Working with nature to solve the problem

So if that's the problem, what's the solution? In the UK a new approach to drainage called Sustainable Drainage Systems (SuDS) is being implemented. With a SuDS approach rainfall is held as close to where it fell as possible (at source) then released slowly back in to the ground or sewer. This means water flows downstream more evenly over time reducing the chance of flash flooding. Less water entering into the traditional drainage system also means less chance of it overflowing and getting mixed up with sewage.

SuDS holds up water flow by working with nature rather than against it. Instead of impermeable surfaces such as paving forcing water to flow along the surface straight to the drains, it is allowed to infiltrate and be stored in more natural surfaces such as planted areas and ponds. Water moving through such features is also filtered so when it does reach the river, less pollutants are in it.



Habitat space



Remove pollutants



Carbon sequestration

### How do they help the environment?

By mimicking natural drainage systems, SuDS have the potential to bring back some of the wildlife that disappeared as we built and paved over the land to make our towns and cities.

The trees, planting, grass, ponds and streams that may make up a SuDS scheme adds up to an increase in **habitat space** for different species. More space for habitats and the creation of wildlife corridors means more biodiversity.

SuDS also removes pollutants from the water as it moves through the system – this can be called 'treatment trains'. Different kinds of planting and filters can help remove both soluble and **particulate pollutants**. The cleaner water that reaches our rivers is also helpful for wildlife there.

A final consideration is the role of increased green and blue space in **sequestering carbon** from the atmosphere, making a contribution to the urgent goal of reducing CO2 and runaway climate warming.

And what other benefits?

We are becoming increasingly aware of the broader benefits of SuDS. If we see water as a resource to be valued rather than just removed as quickly as possible, a range of benefits become apparent. Increased 'green' (plants and trees) and 'blue' (ponds, streams, wetlands and water features) space means more space for recreation.

People love playing, exercising, socialising and just general sauntering in natural environments. A beautiful environment is one that brings people together and this could even involve growing your own food! What's more, all this increased activity is good news for local businesses.

SuDS schemes also help communities become more resilient and adaptable to climate change which is expected to increase heavy rainfall events by 40% by 2080.

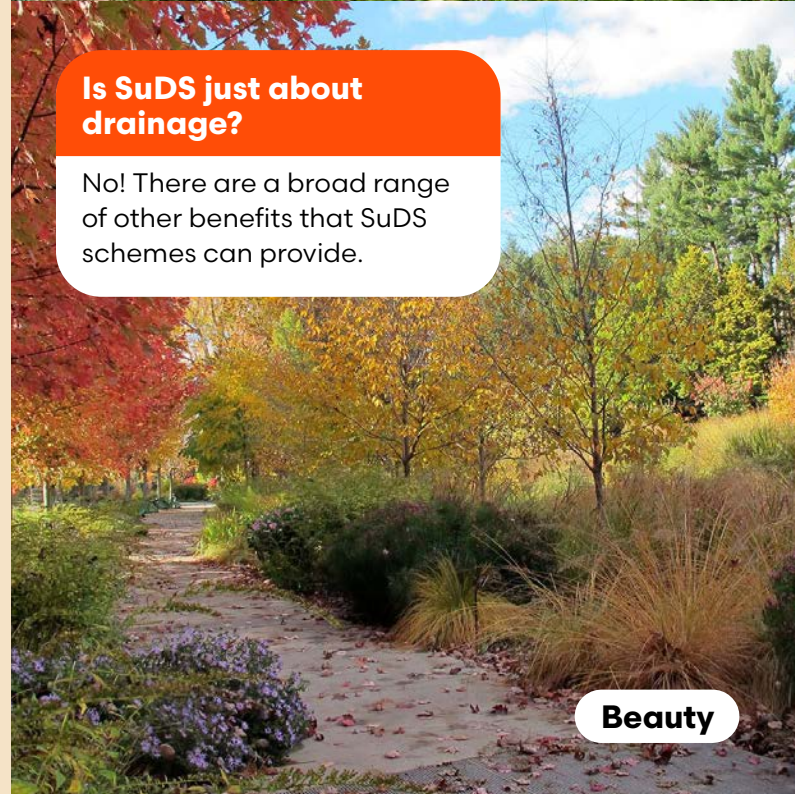
DEFRA also estimates that SuDS can be between 10% and 85% cheaper than traditional drainage infrastructure upgrades.



Recreation



Being together



Is SuDS just about drainage?  
No! There are a broad range of other benefits that SuDS schemes can provide.

Beauty



Growing

SuDS can be...



Hidden

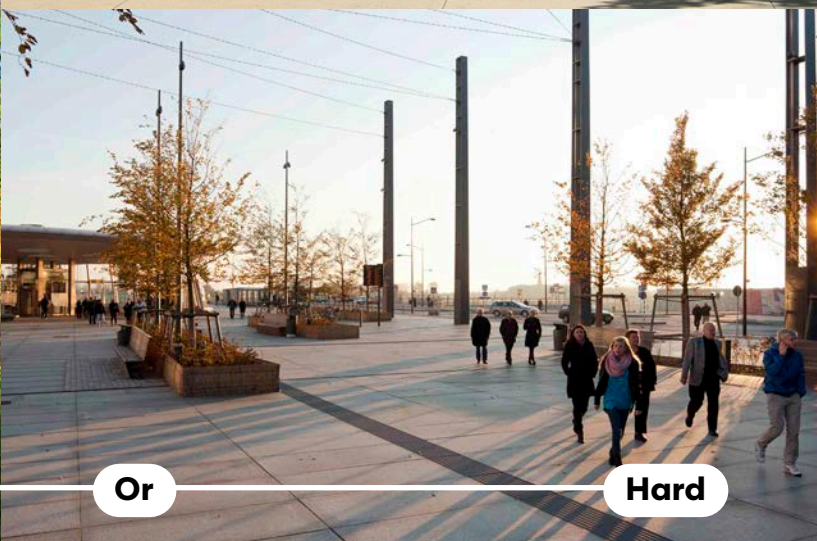


Transformational

Or



Soft



Hard

Or



Small-scale



Large-scale

Or

What do they look like?

There is an enormous different range of what SuDS can look like. From radical street transformations to secret soakaways under permeable pavers beneath your feet that you might not even know are there. And from large-scale infrastructural projects like massive green bridges to a simple and small rain planter.

SuDS components can be 'hard' or 'soft'. Hard components include geocellular systems that look like milk crates and are buried underground or permeable paving which looks like ordinary drives or roads but allow rainwater to soak through. These typically only manage the quantity of water. Soft elements are all the green and natural features like ponds, trees, shrubs and plants and provide water quality, amenity and biodiversity benefits.

SuDS components are a mixture of below ground, above ground and surface level features, and each type is selected based on the site characteristics.

## SuDS and the street

SuDS are particularly useful in the redesign of streets. The multiple advantages of SuDS – whether it be for nature or amenity for neighbours – means that they can be a key part of transforming streets for the better. Greener, cleaner and more active streets lead to safer and more prosperous neighbourhoods.

A SuDS street project could focus on drainage issues, concealing retention geocells underneath

permeable paving. This can allow drainage improvements to coexist with current parking and traffic needs. However, especially at the surface level and above, there is great potential for a more wide-ranging transformation.

Tree planting, bio-retention planters and swales along with new street furniture and play elements can make a street one where people want to stay and enjoy being there.

## Does SuDS mean traffic-free streets?

Not necessarily! There are a broad range of SuDS schemes. Permeable paving and underground geocellular storage is compatible with car parking and car traffic if required.



## Do they require maintenance?

Yes. Maintenance is an important part of making SuDS successful. If there are soft elements, the phase of establishment is particularly important. Trees and planting will usually require watering for at least the first 12 months.

There is also the ongoing maintenance job of cleaning and clearing, just like the needs of traditional drainage systems. Litter can be a problem making SuDS unsightly and can build up to damage plants and get stuck in filters. Therefore, regular litter picking is often necessary. Another issue is deposition of sediments. As water moves through the system it may leave sediment that may need removing occasionally. This is particularly relevant for ponds, swales and channels. The good thing about above ground and natural SuDS is you can see when maintenance is needed unlike buried pipes and tanks. When we become aware of traditional systems that require maintenance it is often too late and in asset failure.

Active stewardship can be the best way to avoid problems like littering and vandalism happening from the



start. When a place is visibly looked after it is more likely to be treated well. Monitoring can also allow problems to be detected and fixed before they become worse.

## Who looks after SuDS?

SuDS can be looked after by either the owner or residents and other local people.

The **owner** may be the Local Authority, a developer or housing association. Maintenance might be incorporated into their maintenance schedule such as council work crews. Or a developer for example may contract the work out to a maintenance company.

SuDS may also be looked after by **local residents and users of the space themselves**. People can organise themselves into volunteer teams and stewardship groups. This can also simply involve users of the spaces looking out for problems such as vandalism and littering and reporting it.

An advantage of local people being involved in maintenance is that those who are in regular contact with the space may be better placed to keep an eye out for any issues.

# What is Co-Design?

Co-design is the bringing together of design professionals with users who may have local knowledge and experience to design together. These groups work together along the whole design process, from initial ideas and brainstorming to management plans after completion. It is a promising new way to help make our streets more sustainable and enjoyable places to be in.

Kenmont Gardens, Fulham

## What is co-design?

### Participatory origins

Co-design has its roots in participatory design emerging in the 1970s, particularly in Northern Europe. The idea was to include non-professionals within the design process rather than seeing it as just the preserve of select experts working in isolation.

### From tokenism to co-production

Different levels or extents of participation can be identified at different stages of the design process. This can range from consultation, where opinions are asked but not necessarily always followed, through to complete community control. Co-design seeks not to consult non-professionals but for designers to actively design with non-design professionals. In this way, the user isn't just focused on, but becomes a designer themselves. The boundaries of roles become blurred.

Importantly, this should also happen at all stages of the design process, not just in the choosing of different already finalised options.

So from the initial brainstorming and conceptualisation all the way to working out how to manage and maintain the finished product or space, design is collaborative.

### A creative response to complex problems

This booklet will particularly focus on the role of co-design in transforming streets. Streets and the neighbourhoods they lie within are complex things! There are many variables involved in making a street successful and we simply can't understand them all. This means design is as much about imagining and working together to make streets work as about fixed solutions to problems. Making successful streets is more than just the spatial layout but also about the purpose of the place and who it brings together. By placing designers alongside non-designers, we can get to be more creative and make designs more in tune with those who will use the street. It's also about knowledge exchange - working together can help build a shared understanding. Everyone has something to gain.

## Do I have to be a professional to help design public space?

No! Co-design is a great way to bring together users of a space who may have great local knowledge and experience with designers who have specific skills such as with software to design together.

## How?

A variety of methods may be employed in co-design. From use of digital visualisations with student 'chaperones' helping people engage with software to model making to design charettes to game playing to workshops. A key role of the designer may be sharing knowledge of the constraints, for example accessibility regulations and budgets. It's all about creating the context for discussion and learning and thinking through design **together**.



## Why?

Ultimately, it's hoped that co-design will lead to better functioning streets more in line with the wishes of those who will use it. Streets are complex, each one unique, and everyone has a different vision of how they would prefer them to be. Co-design is a way of negotiating these competing visions whilst keeping within constraints that mean the transformation of a street can be realised.

Co-design will also hopefully lead to places that are loved and cared for by those that use them. In this sense, the process doesn't end with construction but continues in a sense of common ownership and stewardship that leads to better maintenance. In this way, co-design is part of the goal of creating more sustainable streets.

## How is it different to a traditional design process?

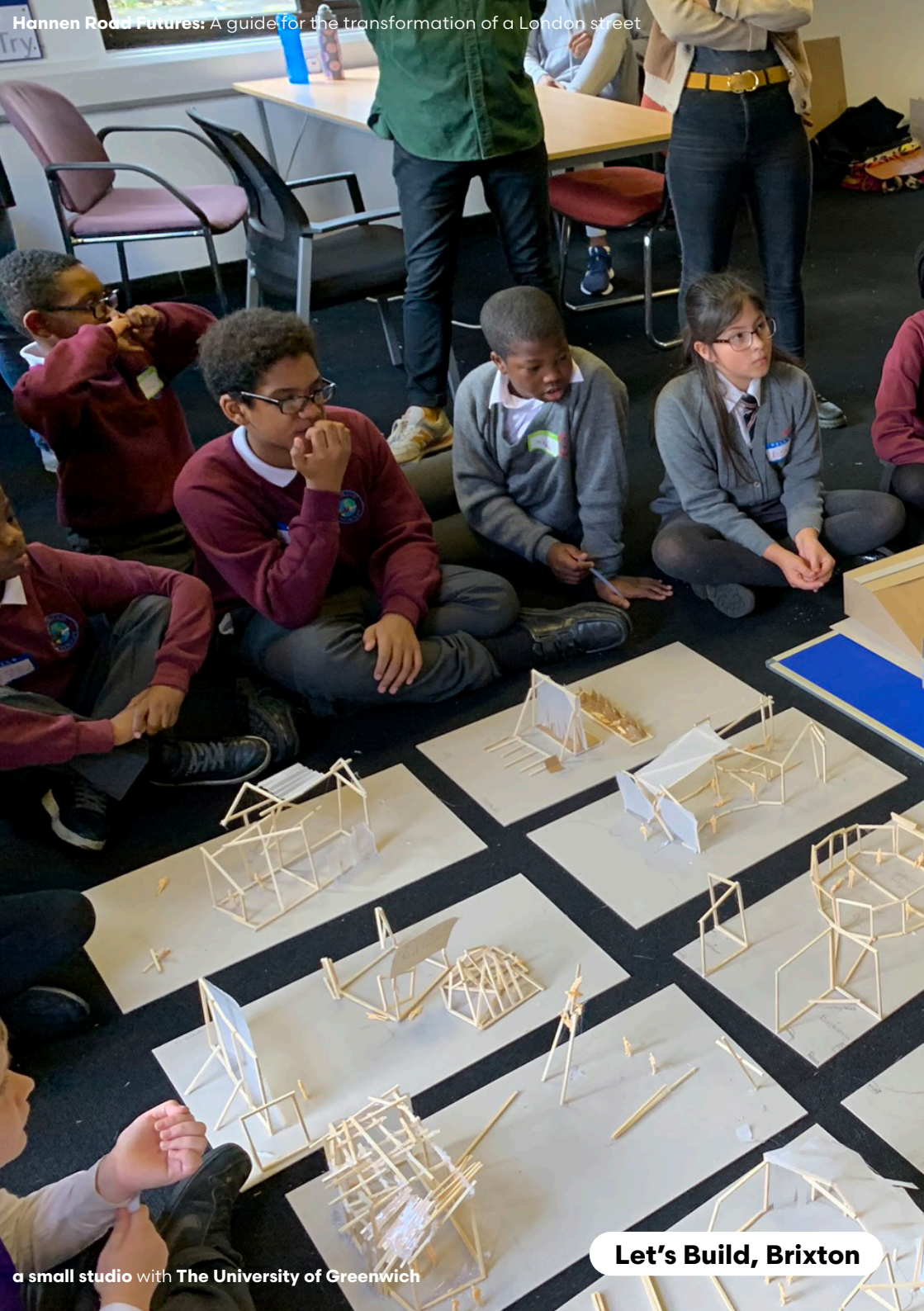
Co-design moves beyond participation within a traditional design process because designers work **with** rather than **for** the public. In this sense, the public is not separate part of the design process to be consulted, but intrinsic to it. The 'front-end' of the design process is particularly important in co-design as public involvement should be from the very beginning. Local knowledge

is viewed as complementary to professional knowledge and in this sense non-designers can be experts too.

Compared with traditional design process, co-design holds the potential for being more sensitive to local conditions – particularly understanding neighbourly relationships and what makes a place 'tick'.







## Who can participate?

One of the great things about co-design is that really anyone can participate. Anyone can be a potential contributor because, as future users of the street, their dreams and desires for it are all important.

Participants can come from all walks of life. From design professionals, the local council to local residents and visitors, everyone has something to contribute because there are no hard distinctions between lay and expert. In fact, the broader the engagement, the more likely an effective design can be reached.

People who are particularly likely to get involved are those that care for the place and those interested in making positive change. People may have specific skills that they can bring with them or perhaps share a passion for sustainable design.

People of all ages have something to contribute. Children have been great creative agents of change in previous co-design projects.

Often it's just about people being brought together by circumstance – that's really where the magic happens. Interesting meetings of minds most happily happen by chance. Perhaps someone has walked by an event by coincidence or maybe even picked up this booklet...

Usually co-design is facilitated by an architect, landscape architect, local authority or artist. However, it's even possible for communities to come together to form an organization such as a Community Land Trust (CLT) and lead the process themselves – hiring the designers they choose as co-participants.

**Let's Build, Brixton**

### How does it help the environment and neighbourhood?

There are hopes that co-design will lead to more sustainable ways of living. When design is more in tune with peoples needs and local knowledge, the designs should work better and last longer.

An important part of co-design is that the process itself can lead to a more active citizenry - people are empowered to care for their surroundings and look after it. This means streets are less likely to become wastefully disused or vandalised.



## SuDS and co-design

Co-design is a particularly exciting approach when it comes to SuDS. Often drainage may seem to be a technical issue, something for engineers to work out. However, as we have seen, the design of SuDS is very broad and can be shaped in a way that really suits those who live alongside them. Co-design is a great way to ensure these wider benefits are achieved.

Maintenance is also very important for SuDS schemes. As a dynamic system that works with the cycles of nature, regular attention is necessary. Local care for SuDS can help deliver schemes that are more ambitious and beautiful

than what could be achieved by a local authority alone.

Co-design can also help expand the amount of space of the street that is devoted to being shared – to being neighbours and being together. This is a tricky process as people may have different concerns and ideas about how their street should be. SuDS can include fun ways of including many different communities – whether that be children, older people, car drivers or commuters – and designing together helps to ensure that everyone's point of view is taken on board.

# How to contribute

Let's imagine Hannen Road as an improved street with a stronger and more playful public space that improves the natural environment.

Join us on a series of workshops to begin the co-design process. Sign up here:



**Hannen Road, West Norwood**

## Collage Making?

We've been preparing visuals of Hannen Road, and have a series of stickers, pens, paper, plants and objects so everyone can imagine a new Hannen Road future. There will be a table for kids and another table for adults to make their own collages showing how the street would look with new SuDS elements. A member of the team will be with you to help.



## SHOW US YOUR AREA!

Take a walk with a local guide and photograph the characteristics of the local area that are important to you



## Show us your Area

Take a walk with a local guide and take some photos. We especially want to see; planting or tree, architectural features and local activities that occur in the area. We will have disposable cameras for you to use, or you can print the photos from your phone at our small printing station. All of your photos will help Lambeth understand the characteristics of the neighbourhood that are important to you.

## Mapping Desire Lines

How do you use Hannen Road? Are you a commuter? Do you like to use the shops? Do you live on the road? Is it part of your daily walk? In this workshop you will be able to mark your route of the street on a very large drawing. The drawing will show us the 'desire lines' of how people use the street.



# About us

## a small studio

A Small Studio is a design studio based in South London and works in architecture, interior design, landscape, planning and research. Being small means that we are flexible. Although we are chartered architects and professional researchers, we use the studio as a platform to work with other professionals. We frequently collaborate with makers, builders, artists, landscape architects, filmmakers and ecologists.



Station to Station Business Improvement District (BID) is a new not-for-profit company limited by guarantee. It has been set up to increase the attractiveness and appeal of West Norwood & Tulse Hill as a commercial destination. It exists for five years before seeking renewal through a ballot in 2021. All the BID's services are extra to those funded through business rates.



## Lambeth

Lambeth Council in partnership with Thames Water Utilities is announcing a new £6 million programme to help reduce flood risk and improve climate resilience across the borough. This programme will provide new green infrastructure on our streets and open spaces that not only support the continued efforts to reduce flood risk for the borough's residents and businesses, but also offer wider benefits such as cooling areas during heat waves, storing carbon and supporting mental health and wildlife.



The Landscape Architecture and Urbanism programmes (BA, MA, MLA, MSc and PhD) at the University of Greenwich are focused on the speculative design of future landscapes and cities informed by site-focused research. The programmes encourage design invention and experimentation from within one of the oldest schools of landscape in the UK, with notable lecturers such as Sir Geoffrey Jellicoe and renowned graduates such as Marti Franck Matllori. The school is based in the award-winning Stockwell Street building, with large studio spaces and 14 landscape roofs. It is the only institution in London offering Landscape Institute accredited education from BA to Masters.



Use this QR code to read more about the events taking place on September 3rd 2023 and to sign up.

Come join us!

# Notes:

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