Southwark's Draft Kerbside Strategy

Watch our animation to find out more about what the kerbside is and what the new policies do
https://youtu.be/Q5yCJ3dU7l4

Have your say

24 February to 28 April 2017

To comment on the policies visit
https://consultations.southwark.gov.uk/

To make suggestions for your street visit
https://southwarkkerbside.commonplace.is/

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Southwark Council
southwark.gov.uk

Contents

Glossary

Air quality: the degree to which the air in a particular place is pollution-free. Poor air quality occurs when pollutants reach high enough concentrations to endanger human health and/or the environment.

Autonomous vehicles (AVs): A vehicle that is capable of sensing its environment and navigating without human input. Commonly known as driverless or self-driving cars.

Click and Collect: A shopping facility whereby a customer can buy or order goods from a store's website and collect them from a designated local collection point.

Density: An urban planning term to refer to the number of people or households in a given area.

Fleet Operator Recognition Scheme (FORS): A voluntary scheme that encourages sustainable best practice for fleet operators. At its core, FORS promotes safe working practices, legal compliance and a corporate social responsibility to improve the performance of fleet operators.

Geofencing: A feature in a software program that uses the global positioning system (GPS) or radio frequency identification (RFID) to define geographical boundaries.

Healthy Streets: A recent model for designing healthy streets developed by Transport for London (TfL). The model takes a holistic approach to how streets should be designed for walking and cycling.

Kerbside: The kerbside is the space on the public highway that is next the footpath (i.e. at the kerb). This includes both the carriageway and nearside pavement space.

Kerb buildouts: A traffic calming measure primarily used to extend the sidewalk, reducing the crossing distance and allowing pedestrians to cross and approaching drivers to see each other where parked vehicles reduce sightlines.

Last mile: Term used in supply chain management and transportation planning to describe the movement of people and goods from a transportation hub to a final destination in the home.

Mode share: Also known as modal share. Mode share is the percentage of travellers using a particular type of transportation or number of trips using a specific type. It is typically reported through travel surveys.

Millennials: The demographic cohort following Generation X; demographers and researchers typically use the early-1980s as starting birth years and ending birth years ranging from the mid-1990s to early-2000s.

Public Transport Accessibility Level (PTAL): This is a measure which rates locations by distance from frequent public transport services.

Penalty Charge Notices (PCN): A penalty for contravention of parking or moving traffic regulations.

Parklets: A small urban park typically involving the re-purposing of a car parking space that provides more space and amenities for people using the street.

Placemaking: A multi-faceted approach to the planning, design and management of public spaces. It capitalises on a local community's assets, inspiration, and potential, with the intention of creating public spaces that promote people's health, happiness, and well being. It is political due to the nature of place identity.

Sustainable Urban Drainage Systems (SuDS): Aim to mimic natural drainage systems to reduce surface water flooding, improve water quality and enhance the amenity and biodiversity value of the environment.

Vision Zero: Multi-national road traffic safety project that aims to achieve a highway system with no fatalities or serious injuries in road traffic.

Have your say

- The public consultation on the draft Kerbside Strategy will be held from 24 February to 28 April 2017. To find out more about our consultation and activities visit www.southwark.gov.uk/consultationhub
- Watch our animation to learn more about the kerbside and proposed policies 2017 https://youtu.be/Q5yCJ3dU7l4
- Our Cabinet has adopted the following principles to guide consultations:
  – Communicate
  – Consult
  – Decide together
  – Act together

Consultation process

This is just the start. We have identified some of the big challenges and opportunities facing Southwark both now and into the future. Now we want to know what you think.

As part of the consultation process we are asking you for information on your local area; how you use your street and suggestions for how it can work better.

We are also asking what you think about our new policies. Do you think these will future proof Southwark? Do they go far enough – or perhaps you think they have gone too far?

We also want to know if you think you can make a difference locally, either as a resident or business.

How will we use your feedback?

We will collate and analyse the comments we receive and prepare and publish a report online. Depending on the quantity of comments this process can take a couple of months.

The comments and any new evidence will be used to review the proposed policies.Once the policies are reviewed, the final strategy will be taken to Cabinet for adoption.

To find out more about the consultation process visit **www.southwark.gov.uk/consultationhub**

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Executive summary

What is the kerbside?

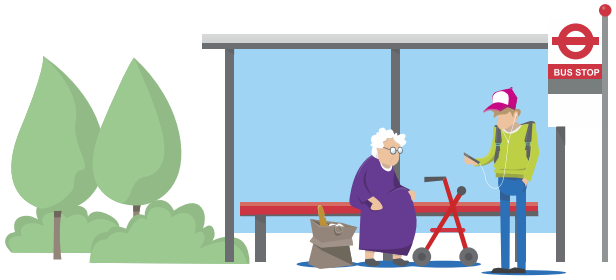
The kerbside is the space which people often think is just for car parking. The kerbside is the space on the public highway that is next the footpath (i.e. at the kerb). For the purposes of this document, this includes both the carriageway and nearside footpath space.

Examples of kerbside use can include street seating, bus stops, cycle and car parking, waste collection, servicing and deliveries and tree planting. The market stalls at East Street in Walworth or the distinctive white posts and grass verges of Dulwich are examples of how the kerbside can be used to shape a place's identity.

What do we know?

Right now we have issues with parking stress and unsafe parking across a number of areas in Southwark. With worsening congestion, air pollution and slower bus speeds, plus more people walking and cycling, it is clear that our parking and kerbside models do not meet today's needs.

We also know that we will have issues in the future, with huge growth in population and numbers of households, combined with continued growth of our local economy, will result in more trips and a rise in the demand for deliveries, servicing and public transport – placing a huge amount of stress on our transport network. We also know with an ageing population and increasing obesity levels we need to create streets that are nicer to walk and cycle, are more accessible and healthier.



Everyone owns the kerbside The kerbside is public space that everyone should have access to and input into how it is used. A high proportion of comments we receive on kerbside use are about car parking.

Balancing use We know that the way people are travelling and demanding services is changing; however we currently allocate kerbside space based on a 1950s model. Despite 60 per cent of Southwark households not owning a vehicle[1] and walking being the largest mode share[2], parking for private vehicles still dominates kerbside space.

Statutory responsibilities We have legal responsibilities for transport and public health in Southwark. These include:

- Ensuring road networks are managed effectively to minimise congestion and disruption
- Reducing serious collisions
- Improving air quality generally and particularly around schools and town centres
- Addressing high levels of obesity and inactivity in Southwark

What do we plan to do?

Better management of our kerbside space will have an important role in road traffic collision prevention and reduction, helping to develop a more active population with less traffic congestion and better air quality.

We plan to introduce new policies to address unsafe parking and parking stress on residential streets and town centres. We also plan to allocate kerbside space based on mode share data, providing more space for the largest mode – walking.

KSS Policy 1: Allocate kerbside space in accordance with Southwark's street wise approach

KSS Policy 2: Prioritise kerbside space for walking and cycling

KSS Policy 3: Implement parking controls based on an evidence led approach

KSS Policy 4: Review parking in town centres

KSS Policy 5: Require safer, robust delivery, servicing and waste management

KSS Policy 6: Implement more green infrastructure

KSS Policy 7: Expand the shared mobility network

KSS Policy 8: Adapt our kerbside to meet future needs

1 40 per cent of households in Southwark that had access to at least one car in 2011.
2 38% of our residents walk as their main mode of transport (LTDS 2016).

The purpose of the strategy

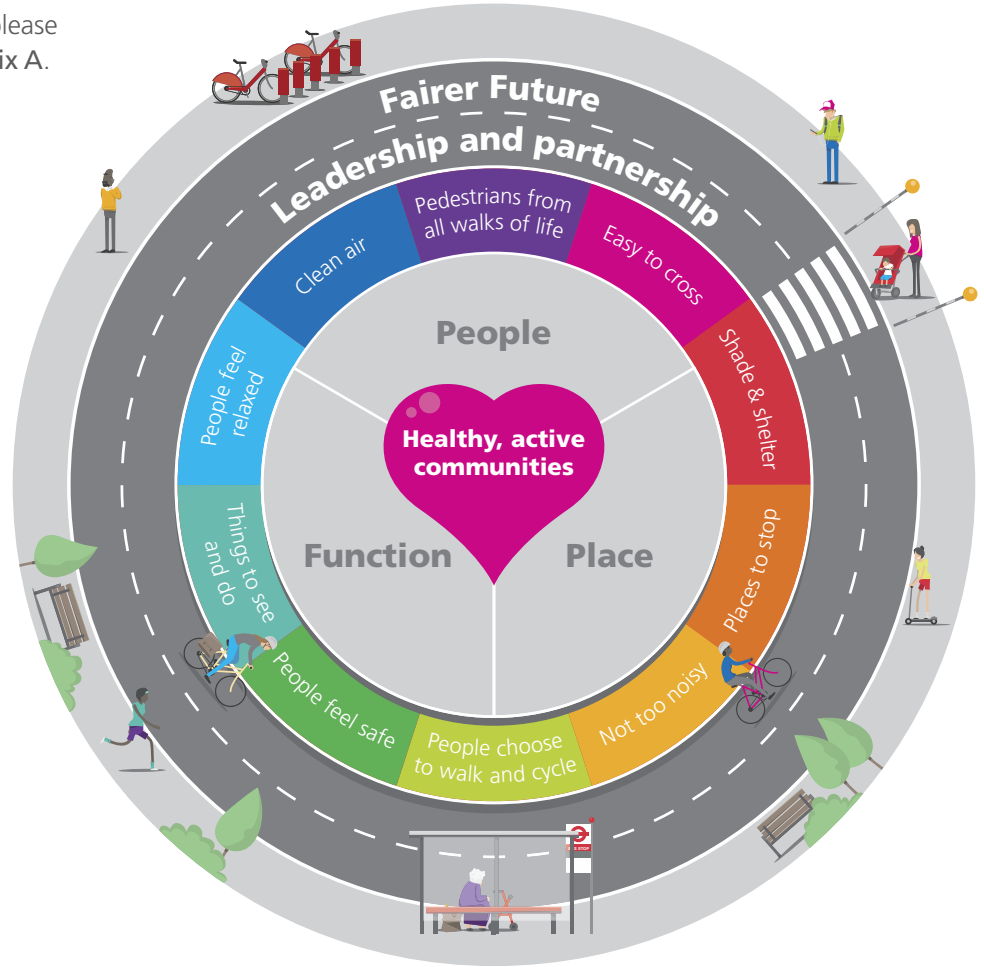
Why do we need a kerbside strategy?

Management of the kerbside is about managing different demands. A well managed, inviting and uncluttered kerbside can help create an attractive, safe, multi-functional street that supports healthier neighourhoods - encouraging healthier lifestyles by supporting more walking and cycling and improving air quality, by reducing congestion on the network. On the other hand, a poorly managed kerbside can result in a chaotic, dysfunctional and unsafe street that is unappealing to residents, businesses and visitors.

We need space for improved bus stops, cycle parking and for people crossing the road. Streets are also public spaces for people to enjoy, with street trees, seating and markets important to our local communities and in creating healthy streets and thriving neighbourhoods. The movement and delivery of goods on our streets are also essential for our local economy, with space required for delivery vehicles to park and unload goods. We also need to consider car parking. But with a decrease in car ownership and use, we need to review whether we are allocating too much space for one use and not enough for other uses, such as people walking or for essential services.

What does this strategy do?

This strategy provides a framework to managing the kerbside space, proposing a different approach led by evidence. To see how we plan to deliver the policies please see the Delivery Plan in the **Appendix A**.



Our commitments and responsibilities

Our *Street Wise* approach

We have a responsibility to ensure that our work is informed by evidence. We collect and analyse data on Southwark's modes and travel patterns as well as population, demographics, health, air quality and emerging trends and research from London and around the world. We have called this evidence led model our *Street Wise* approach. See **KSS Policy 1** for more information.

Transport network management The Council has a public duty to keep people safe, which can include making changes to a road layouts or introducing 20 mile per hour zones. As the Highway Authority, we also have an obligation under the Traffic Management Act (TMA) 2004 to ensure road networks are managed effectively to support our communities and their movement, improve safety, minimise congestion and disruption.

Recent guidance from Transport for London (TfL) advocates a *Whole Street* or *Healthy Street* approach when considering how streets function and are designed. This means addressing the reasons for air pollution, noise, stress, fear and danger. Tackling these will help deliver positive benefits, including cleaner air, less noise, more connected communities, vibrant town centres, less stress and reduced deaths and injuries on our streets. We will ensure our streets are suitable for all ages and abilities, and test infrastructure and materials to ensure they are safe, fit for purpose and accessible for all users.

Public health Since April 2013, local authorities have responsibility for a wide range of public health issues including reducing obesity, improving air quality and increasing levels of physical activity. As part of our public health responsibilities, we need to create attractive, safe, functional streets that reduce air pollution and support people to walk and cycle.

Best practice We will adopt best practices from other cities to ensure that kerbside operations are fit for purpose and reflective of the needs of a 21st century borough in London. This may include dynamic parking systems or virtual loading bay systems and on-street parking that have proved successful elsewhere. We will improve the efficiency of kerbside space for example, by considering a dual use of loading and taxi bays on a time limited basis to support both essential servicing to businesses and the night time economy. See **Appendix K** for the case studies.

Consultation We will continue to talk to you about how we can make your streets safer, functional and more attractive. We will continue to meet our consultation obligations but we will expand on this, and deliver better early engagement and consultation methods. Our cabinet has adopted the following principles to guide consultations:

- **Communicate:** where we provide high quality, comprehensive information in a range of formats so that residents can choose the best option for them
- **Consult:** when we ask you to tell us what you think about something, by completing questionnaires, online surveys or feedback forms, attending forums or one-off focus groups, and we listen to what you tell us before we take any action
- **Decide together:** where we work closely with residents to share ideas and options and together decide what we are going to do
- **Act together:** where we work with our partner organisations on shared priorities and deliver the outcomes together

We will work together We will ensure that we are working together, with an integrated delivery plan across all council-wide and departmental programmes. We will identify opportunities to work together in partnership with other boroughs, organisations, businesses, schools, universities and community groups.

What do we know?

We are continually building on our evidence base and knowledge, collecting data on how people are travelling and emerging markets and trends. This section and the appendices provide the data we have available on existing trends and projections.

Assuming that population and the economy will continue to grow as predicted, we wanted to test our assumptions on what would happen with a do nothing scenario or if we made policy changes. See **Appendix B** for details of our analysis which highlights the potential implications of the two scenarios on the different modes of travel.

Our population is increasing and getting older The 2011 Census estimated Southwark's population at 288,200. However, the most recent figure for Southwark's resident population is 306,745; with a projected increase of 28 per cent (369,000) by 2031 (GLA 2015). The Council is also committed to building a minimum of 2,376 homes per year, which will contribute to an increase in the population. Southwark will also experience a change in its age profile. While Southwark is currently a young borough with 64 per cent of its population under the age of 40 (compared to a London average of 60 per cent for the same age group), the 65+ age group is predicted to grow the fastest (32 per cent) and the 20-39 group the slowest (9 per cent). **See Appendix B**.

We will need to adapt our public realm to support the Council's positive ageing and independent living objectives. Older people for example, typically drive less and favour public transport. Combined with an increase in the population, we need to consider wider footpaths, more frequent and safer pedestrian crossings, accessible bus stops and uncluttered, pleasant town centres to sit and relax in.

Road traffic collisions are far too high
More people walking or cycling in Southwark are killed or injured than any other mode of transport. Despite progress in recent years, the number of reported road traffic collisions in the borough is still far too high. 1,018 casualties were recorded in Southwark in 2015, with 89 of these resulting in either death or serious injury (STATS19 Data). Many of these casualties are around key arterial roads on the TfL-controlled network such as Peckham Road, the Old Kent Road, Elephant and Castle and Tower Bridge Road. However, there are significant collisions at junctions on borough controlled roads including Walworth Road, Camberwell Road and the Surrey Quays area. **See Appendix H**.

Car ownership and use is declining
The way people are travelling and accessing services is changing. People are now more likely to prefer to access services on demand – particularly in regard to transport. Car clubs, bicycle share systems (BSSs), like TfL's Santander Cycle Hire, and private hire vehicles models such as Uber are dramatically increasing in popularity.

The general trend in London has shown a decline in car ownership levels per household with an overall 5.1 per cent drop (from 63.5 to 58.4 per cent) across the Capital from the 2001 Census. The fall across the Inner London boroughs has been even more prevalent with a 6.6 per cent drop in car ownership levels to just over 43 per cent by 2011 in Southwark.

Despite 60 per cent of Southwark households not owning a vehicle[3] and a long-term trend for continued decrease in car ownership, parking for private vehicles still dominates kerbside space. With fewer cars being owned we are seeing more people walking, cycling or using public transport with more demands on the kerbside to support these uses. **See Appendix D**

Looking forward, the way people access transport (car sharing schemes and cycle hire) and technology innovations such as autonomous vehicles may help free up kerbside space as private car ownership becomes less prevalent.

3 40 per cent of households in Southwark that had access to at least one car in 2011.

Southwark's Kerbside

What do we know?

Walking

Pedestrians, cyclists and public transport users visit and spend more regularly at local shops

38% of our residents walk as their main mode of transport

This doesn't include people walking to bus or train

22% travel by car

38%
22%

LTDS 2016

Casualties and deaths

1,018 casualties recorded in Southwark

89 resulted in death or serious injury - mostly by people walking or cycling

STATS19 Data 2015

7% of deaths in Southwark can be attributed to air pollution

JSNA 2015

Deliveries

361,200 deliveries in Southwark per week

30% increase in delivery trips by 2030

93% of people living or working in London order items for delivery at least once a year

Enabling growth

GLA 2016

13.2% increase in Southwark's residents

47,000 new office jobs by 2036

11,000 new homes by 2043

Older people drive less and use more public transport

Leisure is now the most common trip purpose

Remote working has increased to **9.5%** from **7.0%** since 2001

9.5%

TfL 2015

Changing markets

Access not ownership

and the move towards sharing and new technology (Mobility as a Service) are changing travel patterns

128 car club bays and **8,587** members in Southwark

10,000+ members Santander Cycle members and **3.2 million+** hires from Southwark docking stations since 2010

TfL 2016 ZipCar 2016

28% increase in older population

Traffic may start to rise as Southwark's population grows

Total annual cost of treating conditions related to being overweight or obesity = approximately **£16b**

NHS 2016

Healthy streets

42% of Year 6 schoolchildren in Southwark are overweight or obese

55% of adults are overweight or obese

GLA 2013

54,669 trees in Southwark

22,254 are planted along borough roads

Southwark, with Lewisham, has the highest number of obesity related NHS hospital admissions

Heath and Social Care Information Centre, 2014

Infrastructure

Average car size is getting bigger.

RAC 2015

60% of Southwark's households don't own a car

RAC 2015

average car in the UK is driven **only 4%** of the time

Young people are less likely to have a driving licence than 20 years ago

TfL 2015

Londoners are driving less

RAC 2015

8 in 10 children in London do not meet minimum activity levels – 1 hour/day

TfL 2016

RISING FUEL COSTS

COMMUTING

LEISURE & RECREATION

ENABLING GROWTH

IMPROVED HEALTH & PRODUCTIVITY

HEALTHY STREETS

Considerations for Southwark's Street Wise approach

Most private cars are parked all day and are getting bigger The Royal Automotive Club (RAC) estimates that the average car in UK is in use only 4 per cent of the time. The remainder of the time cars are parked either at home (80 per cent) or elsewhere (16 per cent). The average car size is also getting bigger and takes up more space on our kerbsides. The Ford Escort of 1968 was five feet wide for example whereas today's Ford Focus is six feet wide.

Increasing numbers of servicing and delivery vehicles 192 million deliveries are made in London each year.[4] With 120,400 households this suggests that Southwark could be experiencing up to 361,200 deliveries per week. With an increase in Southwark's population, employment and changing consumer behaviour, delivery and servicing movements are expected to grow by 30 per cent by 2030 – equating to an additional 108,000 trips. We need to provide space for this service, particularly within new developments, and improve management of the last mile of deliveries.

Reinvesting parking revenue Parking controls are implemented to improve safety, accessibility, servicing, and the flow of traffic and ensure appropriate use of the highway network. Enforcement activity aims to keep traffic moving, minimise obstructions, safety hazards and encourage compliance with the regulations. On average the council issues just over 100,000 PCNs for contraventions on our network.

The Council receives approximately £12m per annum from parking meters and car parks, parking permits and penalty charge notices. With an operating cost of £7m this generates a surplus of £5m. The surplus is reinvested in the highway network with three quarters of this spent on highway maintenance and the balance supporting borough wide measures including road safety and school crossing patrols.

Employment growth Employment growth in Southwark is forecast to increase over 30 per cent by 2050. It is expected that the physical clustering of jobs will remain as important as ever, with continued demand for office space in central London. Evidence collected for the New Southwark Plan suggests that around 47,000 new office jobs alone will be created in Southwark over the period leading up to 2036. **See Appendix B**.

The changing nature of employment and a rise in flexible working also need to be considered. Remote working can lead to more home deliveries, varied working hours while meetings are often conducted outside the traditional workplace (such as cafés). The net result is that more journeys take place out of peak hours and with more demands on our kerbsides throughout the day.

Our air quality is poor According to the 2015 King's College University report, up to 9,500 deaths in London each year can be linked to air pollution[5].
See Appendix E.

We are becoming less active Residents are not doing as much physical activity as they should be. Less than 20 per cent of Southwark residents aged 40-79 years are active, with Southwark having some of the highest rates of overweight and obesity in the country. 56 per cent of adults and 44 per cent of children in year 6 (aged 10-11) are classified as being either obese or overweight. To encourage more incidental exercise we need to consider how to adapt our streets to reflect our walking and cycling aspirations. **See Appendix G**.

Future proofing for climate change
Climate change means that we need to future-proof our streets for more extreme weather events including hotter, drier days and more instances of flash flooding. We need to adapt our kerbside areas with more street trees and green infrastructure to reduce pollution, provide shade on hot days and to reduce surface water flooding – an issue in many parts of the borough. **See Appendix F**.

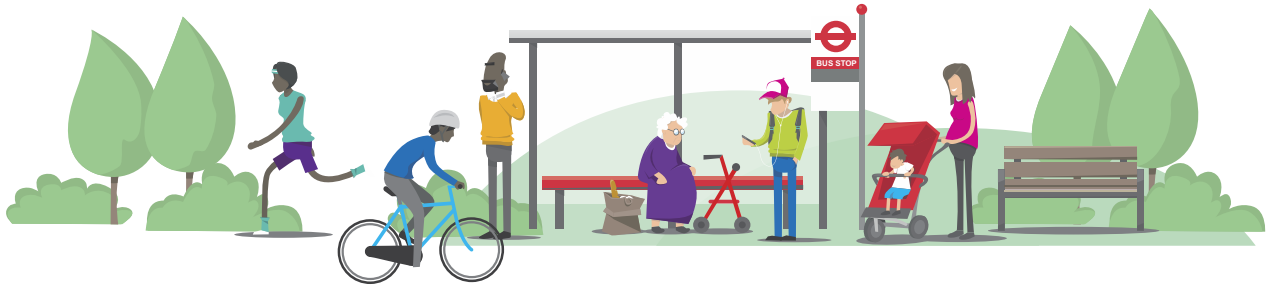
4 TfL (2016) 'Travel in London- At a glance'
5 Heather Walton, David Dajnak, Sean Beevers, Martin Williams, Paul Watkiss and Alistair Hunt, Understanding the Health Impacts of Air Pollution in London, 2015

Why?

Appropriate management of the kerbside is required to support residents and local economic activity. Allocation of space needs to reflect how people are using the space now and in the future. At the moment, a majority of our kerbside space is taken up by cars parked – despite declining use and ownership across Southwark – with many cars parked for free by people living outside the borough. Walking, on the other hand, has the largest mode share but often the least amount of space allocated.

More people walking or cycling in Southwark are killed or seriously injured than any other mode of transport. We need to ensure that people walking can see moving traffic clearly at all times. Parked cars, particularly near junctions, can prevent people walking from seeing on-coming cars. The majority of cyclist collisions also occur at junctions meaning we need to prioritise investment and safety interventions here (see **Appendix G**).

We estimate that around two thirds of all junctions in Southwark are protected with yellow lines. The majority of these are located within existing Controlled Parking Zones (CPZs). However, there are approximately 1,000 junctions without restrictions where inconsiderate or unsafe parking cannot be enforced against by civil enforcement officers that we need to address in the interests of highway safety.



What will we do?

Street Wise We will use the Southwark Street Wise approach when prioritising the allocation of space and balancing competing demands on the kerbside (see table overleaf).

Highway safety Measures to ensure highway safety for all users will be the first priority in all decision making about reallocating kerbside space. For example, we will improve pedestrian visibility by restricting unsafe parking at junctions and pedestrian crossing points with increased use of kerb build-outs and double yellow lines.

Schools We will prioritise kerbside interventions around schools to tackle both highway safety and air quality issues.

Local context We will take account of local context, for example whether a street is part of a town centre, a public transport corridor or a residential street will be a key consideration on how we apply this approach.

Priority	Intervention	Why?
1	Highway safety	• Healthy Streets • Air Quality objectives particularly around schools • Impacts on all kerbside users • Statutory obligation • Reduce pedestrian and cyclist casualties • Vision Zero objective
2	Pedestrian improvements for all ages and abilities	• All users are ultimately pedestrians • Social equity reasons • Consistent with adopted movement hierarchy • Most efficient use of space • Economic benefits
3	Cycle improvements	• Cycling is for all ages and abilities • 10 per cent by 2025 target • Contributes to many public health objectives • Economic benefits
4	Public transport & shared mobility options	• Typically bus stop/ rail stations- high footfall environment • Efficiency, environmental & social equity reasons • Journey time improvements • Ease of accessibility
5	Delivery & Servicing	• Support local economic activity • Minimise conflict with other road users • Green last mile trips
6	Street trees/ green infrastructure	• Climate change adaptation • Reducing surface water run-off • Reduce urban heat island impact
7	Parking allocation priority on residential streets Parking allocation priority in town centres	Discourage commuter parking and prioritise, where required: • Disabled parking • Residential cycle parking including adaptive bikes • Car sharing vehicles • Resident vehicle parking • Disabled parking • Prioritise short stay spaces for shoppers

Why?

As a majority of regular trips in Southwark made by walking, it is important that we allocate more space for this activity. A cluttered footway has a negative economic and social impact on an area and creates a poor impression. It is often cited as a key reason why older people in particular will not visit local shopping areas, impacting on their ability to enjoy independent living.[6]

Southwark has also seen a significant increase in the number of people cycling. However, cycle parking by population density remains very low in Southwark. A lack of space to store a cycle at home or to park securely on the street is a key barrier to Southwark achieving higher levels of cycling. Cycle parking is also a proven to contribute to the vitality of town centres and ia an extremely efficient use of kerbside space.
See Appendix F.

What will we do?

We will reallocate kerbside space to provide more space for people walking and cycling.

New powers Since July 2015, London boroughs and TfL have had new powers that make it easier to relocate lighting and signage from the pavement on business owners' properties with 56 days notice. We will adopt these new powers as a highway authority, identifying problematic locations and relocate signage, lighting and other street furniture above ground on buildings. We will continue to improve streets through public realm improvements and pedestrian priority interventions, removing barriers to safe, accessible walking. We will:

- Widen footpaths where possible in high footfall areas, including town centres and around schools, train stations and busy bus stops
- Redesign crossings to more accurately reflect pedestrian desire lines
- Introduce more raised footways and raised entry treatments
- Adopt a zero-tolerance policy in areas known to have proliferation of obstructive A boards on their pavements
- Respond to the site-specific concerns and issues raised by schools, disability and pedestrian groups
- Remove unnecessary guard railing and reduce other street clutter
- Ensure Legible London and other forms of wayfinding signage are located in areas that do not obstruct pedestrian movement

Innovative cycle parking We will be innovative in assessing the long term demand for cycle parking, trialling temporary solutions as a low cost method to test the feasibility of locations.

- We will trial temporary solutions such as bike corrals, pop-up racks or car bike ports as a flexible way of quickly providing on carriageway cycle parking without the need to undertake hard engineering interventions
- Ensure that the vast majority of new cycle parking and cycle hire stations are placed on the carriageway or through kerb-build outs to maintain footway space
- We will prioritise secure, on-street cycle parking on residential streets, using the following criteria:
  - Live in terraced housing with no suitable alternative cycle parking area
  - Live in high density housing with no suitable on-site cycle parking locations
  - Have to navigate stairs in order to store their cycles
  - Are willing to participate in the management of units, if necessary
  - Cycle frequently, or would like to
  - Are willing to give up an on-street car parking permit, if necessary

6 London Travelwatch (2015) Inclusive Streets

Why?

Under the Traffic Management Act (2004) we have a responsibility to protect all residents and visitors from obstructions to the highway. Parking stress is recognised when the average parking occupancy is regularly observed above the available kerbside space for safe parking. Parking stress also reduces residents ability to park on their own street as commuters from outside the borough occupy spaces on uncontrolled residential streets.

Parking Zones (PZs) are a proven tool to reduce parking stress and minimising congestion and disruption. There are currently 23 Parking Zones (PZs) in Southwark covering approximately 800 streets (or 40 per cent) of the borough. There are reports of parking stress in areas not presently covered by PZs. These problems are particularly acute near railway stations and from nearby Parking Zones both from within Southwark and from neighbouring boroughs.

Very Low	No evidence of parking stress	0% to <50%
Low to Medium	Little evidence of parking problem, parking stress may increase during peak times	50% to <75%
Medium to High	Parking stress may be evident during peak times	75% to <85%
High	Evidence of parking problem	85% to <100%
Over Saturated	i.e. Vehicles parking illegally	100% +

What will we do?

Implementation In many cases, the cost of PZ investigation and implementation will continue to be developer funded and be secured through legally-binding planning agreements – particularly within our regeneration areas.

Assess parking controls We will assess the need for parking controls using the following weighted criteria:

Community feedback Community feedback will remain a factor in our decision making process, including the consideration of the length, scale and duration of the proposed parking restriction times. However, Southwark Council by law must consider traffic management grounds and highway safety before public opinion and the consultation should not be confused with a referendum where the most popular option is chosen on a first past the post basis.

Criteria	Example
Network safety and management	• Emergency services' requests • Illegal footway parking and dangerous parking outside of schools • Collision analysis • Clusters of Penalty Charge Notices for illegal parking (PCN) • Impact on traffic flow including increased bus journey times
Local evidence	• Average occupancy observed to be over 100% of the available safe space for parking on a regular basis • Localised air quality impacts particularly around schools • Parking Zones overspill areas
Consistent with targets	• Kerbside space will be allocated to support walking, cycling and public transport use
Supports council's policies	• Delivery of statutory services • Regeneration areas and programme • Planning policy designations • Housing delivery • Support healthy active lives
Community Feedback	• Comments from residents, businesses and councillors

Why?

Kerbside use in town centres has in important role in contributing to the vibrancy and place making of our town centres and retail parades. Providing more footpath space, seating and green spaces adjacent busy to bus stops or cafés in town centres reduces overcrowding and makes the area more attractive and pleasant to be in. Likewise, providing well designed spaces for the delivery of goods or the collection of waste can assist in improving the perception of a town centre.

In recent years we have successfully improved streets across the borough, with The Cut, Flat Iron Square and Walworth Road examples of streets that have become more economically and socially vibrant with changes to their kerbside management.

On-street parking can also complement the economic function of a town centre but it needs to be turned over regularly and efficiently to ensure that spaces are readily available for those businesses that rely on it.

What will we do?

Reviews We will undertake comprehensive rolling programme reviews of the available kerbside space in our town centres to understand how this space is being used and ensure that it meets existing and future needs. This programme is detailed in the delivery plan. This will include the following:

- Collision analysis
- Pedestrian comfort levels and facilities
- Cycle facilities
- Disabled car and cycle parking space
- Bus stop locations and delays
- Delivery and servicing requirements (via the TfL methodology)
- Taxi and private hire vehicle facilities
- Existing parking regulations and pricing

Flexible approach Where on-street parking space has been allocated for general use, we will take a flexible approach when introducing or reviewing charges to ensure that they are appropriate to the location. We will operate the 85 per cent principle to ensure a regular turnover of parking space[6].

Reallocation We will trial the reallocation of road space to provide more footpath width and street seating in areas that meet the following criteria:

- Sizeable area of under-utilised kerbside space
- Identified lack of public space in the surrounding neighbourhood
- Identified community and business support for public space at the location
- Where clear potential to improve and make the environment safer for people of all abilities to walk and cycle more
- Surrounding land uses that can attract people and activate the space, e.g. cafés

The 85 per cent or performance based model ensures that spaces are used efficiently but readily available. The free spaces help to reduce search traffic, congestion and emissions. Prices are set on the Goldilocks' principle – not too low, not too high, but just right. The price of parking will be higher when demand is higher, with the higher price encouraging rapid parking turnover. People in cars will park, buy something and leave quickly, allowing others to use the space.

Why?

TfL estimate that delivery and servicing movements by Lower Goods Vehicles (LGV) are expected to grow by 22 per cent by 2031. This is in line with projections for London's population, employment growth and changing consumer behaviour, with a rise in e-commerce and home deliveries.[7] We need to ensure that these trips are carefully managed to ensure that our streets remain safe for people walking, cycling and using public transport.

Southwark has a number of objectives in terms of managing the movement, safety and efficient operation of freight in the borough. We must in the first instance, look to reduce competition for kerbside space reducing individual freight trips in the borough.

We also need to re-time deliveries to out-of-hours wherever possible to reduce congestion and conflict with other road users at peak times. We also need to ensure that freight vehicles and their drivers adhere to the highest possible standards in terms of safety, noise and emission reduction.

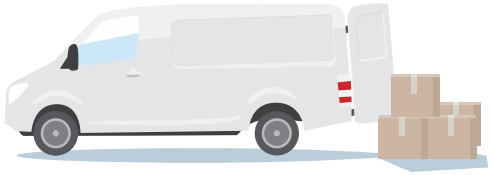
We have a number of significant regeneration and employment areas in Southwark with a range of land uses with differing servicing needs, often within the same development site. Whilst presenting challenges, this clustering of activities offers the possibility of area-based approaches to delivery and servicing within new developments.

What will we do?

Frameworks We will require all new developments to provide a robust delivery, servicing and waste management framework which will include:

- Details of on-site deliveries and servicing facilities and management
- Expected off-peak deliveries and servicing hours, with built in resilience in the event of unforeseen delays, e.g. financial penalties for suppliers
- Re-timing freight trips to out-of-hours wherever practicable
- Robust booking facilities to avoid over-spill onto the public highway
- Maximising opportunities to consolidate trips
- Monitoring once the development is fully operational to show a progressive reduction of the amount of trips to the site year-on-year from the initial baseline year
- A commitment that contractors are fully signed up to the TfL Freight Operator Recognition Scheme (FORS)

On-site deliveries We require all new developments to provide on-site space to carry out all servicing and delivery activity. We will refuse all requests for on-street servicing for major developments. This includes new development proposals located on the Transport for London Route Network (TLRN). At present, too much delivery and servicing activity takes place either legally or illegally on adjacent borough-controlled streets where we are looking to improve conditions for walking and cycling and reduce casualties.



7 TfL (2014) Rethinking Freight

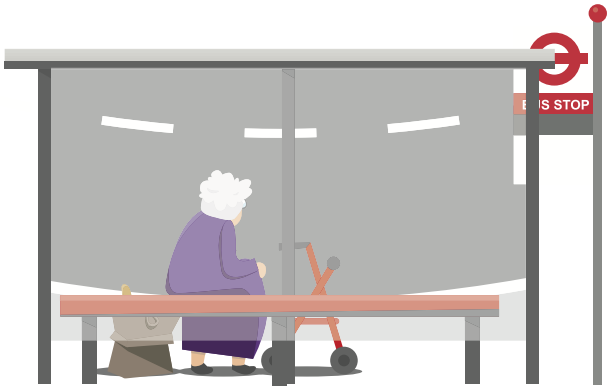
Servicing plans We will work with town centres, street markets, areas of activity and interested parties to advise and support the development of area based delivery and servicing plans. This process will include analysis of existing patterns of freight trips, identification of opportunities to consolidate and reduce the amount of motorised trips.

Click and Collect Work with Network Rail, TfL and local businesses to determine the potential to reduce individual parcel deliveries through the use of more 'Click and Collect' services at local shops and public transport hubs.

Sustainability We will ensure that delivery, servicing and waste management trips are made as green and quiet as possible by supporting the use of zero or low emission vehicles. We will take inspiration from innovative practices such as the Utrecht Cargohopper and Gothenburg's Stadsleveransen city delivery system. See **Appendix J**.

Proactive We will be proactive in working with TfL and local businesses to establish the feasibility of establishing urban or micro-consolidation centres to reduce the number of last mile trips being made by motorised vehicles.[8] A number of areas across the borough could be considered suitable to set up last mile delivery management or zero emission zones including London Bridge, Shad Thames, Canada Water, Old Kent Road, Borough and Bankside. Deliveries and service vehicles in these zones will be prioritised using the following hierarchy:

- Cargo bike
- Electric cargo cycle
- Small electric hopper
- Low emission vehicles such as electric vehicles
- Dual fuel vehicles
- Latest Euro classified vehicles



8 The consolidation of goods at a facility much closer to the delivery point is referred to as micro or urban consolidation. These centres typically serve smaller size areas, handling relatively small and light weight goods and can facilitate last mile deliveries by electric vehicles and/or cargo bikes.

Why?

Climate Change will have a significant impact on Southwark. We will see an increase in the frequency and intensity of extreme weather events, such as heat waves, tidal surges, storms and heavy rainfall. Landscaping, such as trees, planting, rain gardens and permeable paving can help to reduce the urban heat island effect, where urban areas become significantly hotter than rural areas in summer, and can mitigate the impact of surface water flooding by reducing run-off. Appropriate street trees and planting are also proven to help reduce pollution, improve urban biodiversity, provide shade and shelter and have a positive impact on mental health and wellbeing.[9]

Southwark is particularly at risk from two types of flooding – river flooding from the Thames and surface water flooding. As the Lead Local Flood Authority, we assume responsibility for minimising and mitigating flood risk from both ordinary water courses and ground water. The rate of surface run-off and related flood risk can be reduced through the careful design of new development and the inclusion of Sustainable Urban Drainage Systems (SUDS) into the kerbside. Typically this includes de-paving hard standing areas with more permeable surfaces.

What will we do?

Street Wise Using Southwark's *Street Wise* approach, we will allocate more kerbside space:

- Areas where surface water flooding is a known issue
- Areas known to be deficient in green infrastructure
- As part of public realm projects and new developments
- As a means of traffic calming or protecting existing trees, e.g. through kerb buildouts
- Where the roots of existing street trees are protruding onto the footway and narrowing the effective passable width for pedestrians, we will extend the footway around it by utilising carriageway space
- We will identify locations and funding to trial parklets and Fresh Air Squares in our town centres and local retail parades

The right trees We will adopt a right tree, right place approach to tree planting, taking into consideration available space, the type of emissions prevalent in the area, the need to vary tree types for resilience and access and maintenance requirements

The right locations We will work with key stakeholders to identify priority locations to trial parklets in our town centres and retail parades.

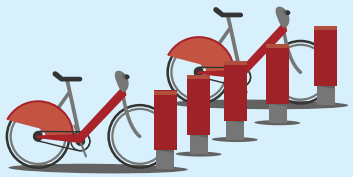
Parklets are small urban parks created through the reallocation of kerbside space. London has a number of successful parklets, with Southwark trialling an innovative parklet, known as the Fresh Air Square, on Tooley Street in partnership with Team London Bridge and Kings College.

Parklets usually extend over the kerbside and replace parallel car parking spaces or redundant loading bays with landscaping, seating, tables and sometimes cycle parking. Unlike private outdoor seating provided by cafés or restaurants, parklets provide free and open places to sit for everyone, making our streets and town centres more accessible, vibrant and friendly to both young and old alike.

9 Forestry Commission England *The Case for Trees in the Urban Environment*

Why?

Shared mobility refers to transportation services that are available to everyone and include public transport, taxis, cars and cycles – including hiring, sharing or pooling vehicles or trips. Changing lifestyle trends (particularly from Millennials) show a move away from private ownership models providing an opportunity to look at how kerbside space is allocated. This decrease in private car ownership is linked to the increasingly technology-led innovation, referred to as Mobility as a Service (MaaS) or Access not Ownership. Aside from public transport (for example the Oyster card) and private pick up and pool services such as Uber, Bla Bla and Uberpool, the most common shared mobility systems most used in Southwark are car clubs and bicycle share systems (BSSs).



Southwark has two BSSs –TfL's Santander Cycles in the north of the borough and a Brompton docking station in Peckham. Cycle hire addresses barriers to cycling, providing access to cycles, addressing the issue of parking and provides opportunities for linked trips with public transport interchanges. Southwark is the sixth busiest borough for hires with over 3.2 million hires from Southwark docking stations since scheme went live in 2010. 3,278 Southwark residents had an active membership in 2015 and members used the scheme consistently throughout the year.

As of September 2016, there are 128 car club bays and 8,587 members in Southwark with our existing car club operator Zipcar. Each car club vehicle aims to remove 26 privately owned vehicle from the road, meaning less emissions and less parked cars. Car club members drive seven times fewer short journeys (less than 5 miles) than car owners do. Zipcar report a 47 per cent increases use of public transport a 10 per cent cycling and 26 per cent increase in walking.

What will we do?

Kerbside space To maximise efficiency of our kerbside space and to increase coverage, usage and choice, we will:

- Move away from a single car club operator model to a more flexible multi-operator model, such as Wandsworth, Lambeth and Hackney
- We will work with TfL and neighbouring boroughs that are trialling point-to-point (such as the Autolib system in Paris) and one-way car clubs (such as DriveNow) to assess the impact on car ownership, parking space and trip generation before taking a position on their suitability in Southwark

Cycle access We will ensure everyone has access to a cycle by supporting the expansion of BSSs in Southwark by:

- Allocating kerbside space for BSSs using the Southwark Street Wise approach
- Secure funding for TfL's cycle hire expansion south to Burgess Park and east to Rotherhithe
- We will facilitate other forms of local BSSs systems in Southwark in areas where the expansion of TfL scheme is not feasible in the short-medium term.
- Working with organisations such as Better Bankside and our Markets teams to support shared use cargo bikes

MaaS is a concept to describe the alternative to owning a private car. Getting around London without a private car could involve a combination of public transport, cycle hire, and services like taxis, autonomous buses and shared cars. The mobility service could be paid for on a subscription or on a Pay-as-you-go basis like London's Oyster card. MaaS is currently being trialled in a number of cities including Helsinki, Hamburg and Vienna.

Why?

The way our residents are working, travelling and shopping is changing. The rise of the gig and sharing economies and the growth of on-line shopping have had a huge impact on our streets and, unless managed, will increase congestion, noise and pollution.

Technological advancements offer an opportunity to respond to these issues and potentially free up kerbside space. Virtual parking and advanced booking of loading bays can assist companies make deliveries on time, and reduce congestion and conflict. Autonomous vehicles, or driverless cars, also provide an opportunity to improve safety, with cars programmed to obey traffic regulations and speed limits and geofencing preventing them from entering certain spaces. Driverless cars could potentially free up kerbside space as the demand for on-street residential and long-stay parking is no longer needed.

Electric and other low emission vehicles can ensure that necessary journeys by high-use vehicles such as taxis, buses and delivery vans are as green and quiet as possible. TfL have recently introduced a policy whereby all new taxis and private hire vehicles registered in London will need to be Zero Emission Capable (ZEC) by 1 January 2018. Many of London's car club operators have expressed an interest in accelerating the conversion of their fleet to electric vehicle or hybrid.

There is also demand for low tech solutions. A recent EU report CycleLogistics suggests that approximately 51 per cent of goods transported in cities could be shifted to cycles and cargo bikes, suggesting untapped potential to reduce emissions and congestion and to support small and medium courier businesses.

What will we do?

Evidence-based approach We will take an evidence-based approach to rebalancing kerbside use, prioritising waking and cycling including the reallocation of car parking to cargo and disabled cycle parking spaces

Parking models Investigate new parking models, including:

- Dynamic parking systems or virtual loading bay systems and on-street parking models, recouping costs by charging for vehicles to use this service
- Shared loading and taxi bays on a time limited basis to support both essential servicing to businesses and the night time economy

Air quality We will support the transition to the use of low emission vehicles for high use vehicles by:

- Supporting TfL to meet the requirements for taxis and private hire vehicles to be zero emission capable by 2018 by facilitating the installation of charging points where appropriate
- Requiring services involved in delivery, servicing and waste collection in the borough to be compliant with Ultra Low Emission Zone (ULEZ) objectives
- Consider requests for communal on-street residential charging points on a case-by-case basis taking into consideration the need to maintain comfortable footway widths and the ambition to reduce street clutter on our streets

Autonomous vehicles We will work with TfL and other relevant stakeholders to assess and maximise benefits presented by the advent of shared use Autonomous Vehicles on our streets. We will assess their relevance against our objectives to promote more active travel and to reduce congestion, pollution and street clutter.

Targets

Future Proof

We will future proof our streets of Southwark by rebalancing the kerbside to reflect the needs of the greatest mode – walking – particularly for local trips and the vitality of our streets. We need to encourage greater levels of safer cycling for longer trips as part of our active travel and public health responsibilities.

The new Mayor of London is in the process of updating the Mayors Transport Strategy that is expected to outline the process for setting targets for London boroughs as part of our statutory Local Implementation Plan (LIP) preparation. The Council also undertakes its own annual monitoring of the Southwark Transport Plan. The following local targets are relevant to this strategy:

Collisions We have a target to reduce all casualties by 33 per cent from a 2004-08 baseline and cycling casualties by 44 per cent by 2020. There will be three stages to the collision reduction target. Stage one is to reduce casualty rates year on year to 2020, with stage two a reduction in actual numbers beyond 2020. Stage three is to work towards vision zero where we will have no cyclist or pedestrian deaths on our roads.

Walking and cycling mode share[10] The current mode share for walking in Southwark is 39 per cent and cycling in Southwark is 3 per cent, which equates to approximately 303,000 trips made by foot and 26,000 cycle trips every day.[11] Our target is to increase mode share for walking to 50 per cent and cycling to 10 per cent by 2025/26. This means an increase of 740,000 daily trips by foot and 40,000 daily trips by cycle in 10 years time. We will continue to review progress against our target on an annual basis as part of the Annual Transport Plan Monitoring report.

Parking management Reduce illegal parking by 10 per cent by 2020. We will review annual progress through tracking and publishing the number of PCNs issued.

The Kerbside Strategy policies also contribute to objectives and targets in other Southwark Council policy documents including:

- Health and Wellbeing Strategy
- Southwark Air Quality Improvement Strategy
- Southwark Tree Management Strategy
- New Southwark Plan
- Physical Activity and Sport Strategy (draft)
- Healthy Weight Strategy (draft)

10 The key measure of success is the number of trips made by foot or cycle in relation to all trips made by all forms of transport. Expressed as a percentage this is known as mode share. Mode share is measured by a household survey that asks people to state their main mode of travel for the trips they make.
11 Data from Travel in London 8 supplementary information – Borough Local Implementation Plan (LIP) performance indicators 2012/13 to 2014/15.

Monitoring and reporting

Reporting

This information will be reported through the Council's Annual Report and the Transport Plan Annual Monitoring Report.

Available online at
www.southwark.gov.uk

What will success look like?

By 2030 our streets will be quieter, safer and more attractive for all users. We will have continued to reduce the speed and volume of private motor vehicles on our roads. Our town centres and retail parades will be cleaner, prosperous and more enjoyable to spend time in.

Walking and cycling will be how people choose to travel. Longer trips will be made by public transport supported by an accessible shared mobility services. Deliveries and servicing impacts will be mitigated through fewer trips, safer, greener and quieter vehicles.

We will be better prepared for the impacts of climate change with more street trees and planting to reduce surface run-off in times of heavy rainfall. We will have made dramatic improvements in air quality and have achieved our Vision Zero target for road safety.

Monitoring The following sources will be used to measure the progress of the Kerbside Strategy.

- Parking stress data, including town centre health check reviews
- Reviews of Parking Zones on residential streets
- Air Quality reviews
- Collision data (STATS 19)
- Cycle counts
- Pedestrian counts
- Increase in amounts of new public space created from reallocation of road space
- Scheme and network evaluation
- Auditing

Funding

Where will the funding come from?

The reallocation of kerbside space will be considered across all relevant work programmes with a majority of the transport budget to be spent on schemes that directly benefit people who walk, cycle and take public transport. Not every scheme will need to be expensive or complicated, with interventions such as footpath widening and parklets offering low expense options to test the positive impact on the local area.

The funding will come from various sources including parking revenue surplus, Transport for London, developers, capital budgets and EU funding. We have also been successful in securing transport improvements through a wide variety of sources including the use of planning obligations, Mayor of London funding awards for air quality improvements, electric charging points, Pocket Parks and we will continue to work to identify future funding streams.

We will use the funding that we have available in smarter ways. We will continue to be innovative in terms of looking at revenue including advertising and sponsorship and closer partnership working with neighbouring boroughs.

Appendix A

Delivery plan

Scheme | KSS Policies | Year and allocated funding £000

	2016/17	2017/18	2018/19	2019/20	Confirmed/identified	Funding source[12]
Local Environment Improvements	2, 5, 6	100	200	100	400	TfL, LBS
Pedestrian improvements	1, 2, 8	200	250		450	TfL, LBS
Legible London (wayfinding) expansion	1, 2, 4, 6, 7	17	90	50	157	TfL, BIDs
On carriageway cycle parking	1, 2, 4, 6, 7	110	110	110	330	TfL, LBS
Parking stress review	1, 3, 4		200		200	LBS
Parking Zone expansion	1, 2, 3, 4	300	300		600	LBS
Town centre kerbside review	1, 2, 3, 4, 5, 6, 7, 8		50	50	100	LBS
Double yellow lines programme	2, 3	70	70	70	210	LBS
Cycle hire expansion	1, 2, 4, 6, 7		1,600	500	2,100	LBS, TfL
Area based delivery and servicing plans	5	60	30	30	120	TfL, BIDs, LBS
Dynamic/dual parking/loading bays trial	3, 4			50	50	LBS, TfL
Car club expansion	6, 7					LBS (officer time)
AV and EV technology pilot	6, 7	TBC			TBC	TfL, Source London
Parklets and green infrastructure	1, 2, 6, 8	30	30	30	90	LBS, LSBU, BIDs

12 LIP funding post 2016/17 is assumed

Appendix B

Population growth and changing demographics

Population growth

London's population is expected to grow to around 10 million people over the lifetime of the Strategy. As an inner London borough, Southwark is one of the most densely populated local authorities in the UK and more than twice as densely populated as the London average with 10,632 persons/sq km compared to 5,510. The 2011 Census estimated Southwark's population at 288,200, an increase of 18 per cent since the 2001 Census. However, the most recent figure in 2015 put the Southwark's resident population at 306,745. By 2031, the Southwark resident population will have grown to 369,000 individuals or a 28 per cent increase from the 2011 figure.

Neighbouring boroughs such as Lambeth, Lewisham and Tower Hamlets will also experience significant population growth over the same timeframe. This high population growth will put pressure on London's existing and planned transport infrastructure as the rate of investment is highly unlikely to keep pace with the level of demand. This will in term lead to greater demands on London's and Southwark's surface transport, which includes our streets and kerbside spaces. Scenario testing showing the potential implications on modes of travel is discussed in **Appendix C**.

Demographics

Southwark is a young borough with 64 per cent of its population under the age of 40. This compares to a London average of 60 per cent for the same age group. Southwark's resident population is estimated to increase by 47,018 persons over the next 10 years. This equates to a 15 per cent increase, compared to a 10 per cent increase in London. The 65+ age group is predicted to grow the fastest (32 per cent) and the 20-39 group the slowest (9 per cent).

This age structure plus increasing higher life expectancy levels means that we will need to prepare for an ageing population. Our public realm will need to adapt to support the Council's positive ageing and independent living objectives. Older people are less likely to drive cars, favouring public transport and walking. As walking speeds become progressively slower as we get older, we will need to consider a wide range of interventions including, removing street clutter, reducing the distance between transport stops, shops, benches, trees for shelter and shade, public toilets and improving pavements and allowing more space and time to cross the road, supporting our older residents to remain socially and physically active.

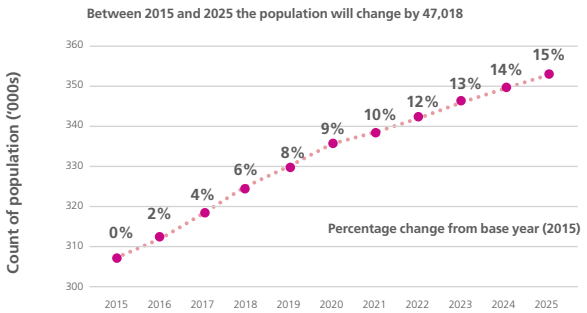
Greater London population growth between 2011 and 2031 (absolute value by LTS zones)

Population change, Southwark 2015 to 2025

Southwark resident population is estimated to increase by **47,018** persons over the next 10 years

This equates to a **15%** increase, compared to a **10%** increase in London

The 65+ age group is predicted to grow the fastest **(32%)** and the 20-29 group the slowest **(9%)**



Appendix C

Scenario testing

Using transport data and trends, as well as population and economic growth projections, we have tested a number of scenarios up to 2045 to see the impact of policies in delivering streets for people – particularly to understand the implications for not having strong kerbside policies. The diagram below summarise the scenarios described in the paragraphs, followed by a table with data and forecasts.

Scenario 1:

What happens if the population and economy continue to grow, with no policy change or active travel behaviour change?

Assumptions:

- High growth of population and total number of trips (about 80,000 more predicted trips every year)
- Despite decrease of percentage mode share, trips made by private motorised transport will increase (about 130,000 more predicted trips in 10 years)
- Despite low decrease of percentage mode share, trips made by train/underground will increase (about 108,000 more predicted trips in 10 years)
- Despite decrease of percentage mode share (from 19.2 per cent to 12.6 per cent) trips made by bus will increase (about 38,000 more predicted trips in 10 years)
- Cycle mode share will grow very slowly from 3.4 per cent to 3.9 per cent (about 32,000 more predicted trips in 10 years)
- Walk mode share will grow from 39 per cent to 47 per cent (about 400,000 more predicted trips in 10 years)

Impact:

- The number of trips predicted is not sustainable and it would create congestion and issues. It could also create unfair access to transport for people with special needs.
- An increase of trips by private motorised transport is not sustainable and there would not be space on the streets for an increasing number of cars and parking. Even if as a percentage mode share it decrease it is necessary to avoid the absolute number of trips by car and motorcycle to grow, to avoid congestion and worst air quality
- An increasing number of trips will create congestion and delays if the service is not improved. Improving rail and underground is related to bigger projects and is not always possible on every service. For this reason is important to promote active travel when possible and for short distances.
- Despite the decrease on percentage mode share the absolute number of trips by bus will increase creating congestion on the service and requiring more buses and routes to cope with that. This problem is related also to private transport on street that will need to decrease to improve the reliability of bus services and more space on the streets dedicated to bus stops and lanes.
- Cycling has a great potential to increase active travel and health and to decrease congestion on streets and public transports. Without policies helping road safety and space on the street dedicated to cycle lanes, parking and cycle hire the increase will be very slow, losing the potential for a active and sustainable mode of transport for relatively long distances usually up to 10 km that are not always suitable for walking.
- Walking will increase both percentage and absolute number of trips maybe due to congestion in other transport modes and because of fear of cycling. This also because most of the trips are within a distance that is walkable. The growing price of transport could be another reason of people walking more. This is a positive trend but this will require policies to make the walking journey safe and create more spaces for people to walk and more traffic free routes.

Scenario 2:

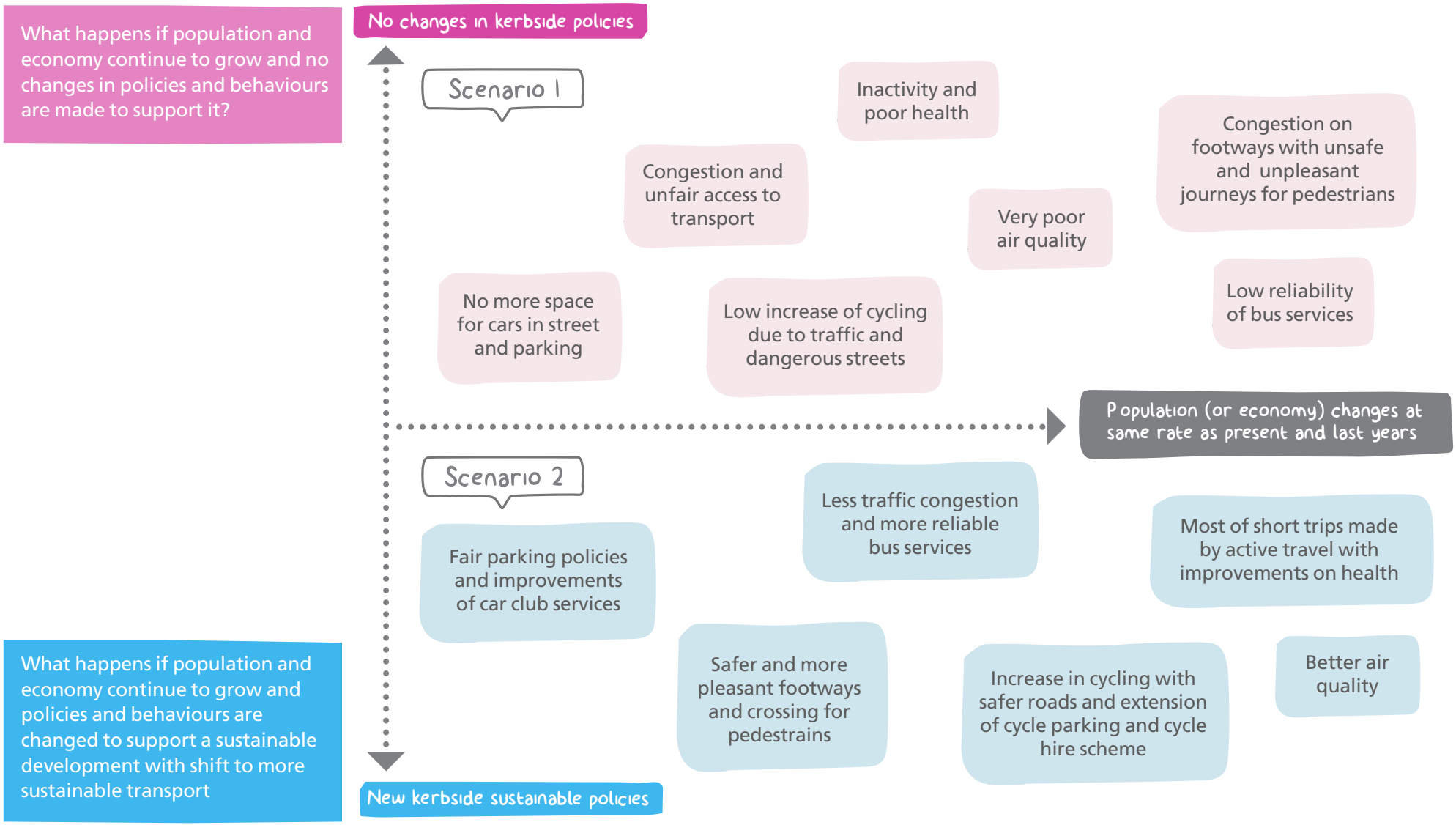
What happens if the population and economy continue to grow, with policy changes that support sustainable development and an increase in active travel behaviour?

Assumptions:

- High growth of population and total number of trips (approx. 80,000 more predicted trips every year)
- Slow decrease of percentage mode share and trips made by private motorised transport will increase (approx. 2000 less trips in 10 years)
- Despite low decrease of percentage mode share, trips made by train/underground will increase (approx. 108,000 more predicted trips in 10 years)
- Despite decrease of percentage mode share (from 19.2 per cent to 12.6 per cent) trips made by bus will increase (approx. 38,000 more predicted trips in 10 years)
- Cycle mode share will grow very fast from 3.4 per cent to 10 per cent (about 120,000 more predicted trips in 10 years)
- Walking mode share will grow from 39 per cent to 50 per cent (about 450,000 more predicted trips in 10 years)

Impact:

- Need to guarantee access to everyone to services in the fastest and simplest way in each of the mode share. At the present situation of infrastructures and highways the number of trips predicted is not sustainable and it would create congestion and issues. It could also create unfair access to transport for people with special needs.
- As a result of sustainable policies, fair parking policies and improving car club and home delivery services, an increasing number of trips will create congestion and delays if the public transport service is not improved. Improving rail and underground is related to bigger projects and is not always possible on every service. For this reason is important to promote active travel when possible and for short distances.
- Despite the decrease on percentage mode share the absolute number of trips by bus will increase creating congestion on the network, with more buses and routes to address the increase in journey times. Private transport will need to decrease to improve the reliability of the bus services, with more space on the streets required to be dedicated to bus stops and lanes.
- Cycling has a great potential to increase active travel and health and to decrease congestion on streets and public transports. With policies addressing road safety and space on the street dedicated to cycle lanes, parking and cycle hire expansion, the increase could be very high, covering trips with relatively long distances usually up to 10 km that are not always suitable for walking. Most of the trips today are a feasible distance.
- Walking will increase both percentage and absolute number of trips, possibly due to congestion in other transport modes. This also because most of the trips are within a distance that is walkable. The growing price of transport could be another reason people walk more. Policies to improve road safety, provide space for walking and pleasant streets will help the growth of walking and active travel.


What happens if population and economy continue to grow and no changes in policies and behaviours are made to support it?
No changes in kerbside policies
Scenario 1
Inactivity and poor health
Congestion and unfair access to transport
Very poor air quality
Congestion on footways with unsafe and unpleasant journeys for pedestrians
No more space for cars in street and parking
Low increase of cycling due to traffic and dangerous streets
Low reliability of bus services
Population (or economy) changes at same rate as present and last years
Scenario 2
Less traffic congestion and more reliable bus services
Most of short trips made by active travel with improvements on health
Fair parking policies and improvements of car club services
Safer and more pleasant footways and crossing for pedestrains
Increase in cycling with safer roads and extension of cycle parking and cycle hire scheme
Better air quality
What happens if population and economy continue to grow and policies and behaviours are changed to support a sustainable development with shift to more sustainable transport
New kerbside sustainable policies

Summary of mode share

Londoners' trips with an origin in Southwark, trips per day and shares by main mode, average day (7-day week), by three year averages

No changes in kerbside policies

Scenario 1

Years	Period	Trips/Day	Rail/Tube/DLR	Bus/Tram	Taxi/Other	Car/Motorcycle	Cycle	Walk	Rail/Tube/DLR	Bus/Tram	Taxi/Other	Car/Motorcycle	Cycle	Walk
2008/09 to 2010/11	1	520,500	83,134	131,889	5,184	124,805	17,078	158,409	16.0%	25.3%	1.0%	24.0%	3.3%	30.4%
2009/10 to 2011/12	2	591,900	98,628	141,186	7,050	134,119	27,091	183,826	16.7%	23.9%	1.2%	22.7%	4.6%	31.1%
2010/11 to 2012/13	3	686,100	114,318	144,980	7,808	151,889	30,387	236,725	16.7%	21.1%	1.1%	22.1%	4.4%	34.5%
2011/12 to 2013/14	4	761,000	122,567	143,920	7,016	169,665	34,793	283,046	16.1%	18.9%	0.9%	22.3%	4.6%	37.2%
2012/13 to 2014/15	5	776,990	121,964	149,182	6,146	170,705	26,037	302,956	15.7%	19.2%	0.8%	22.0%	3.4%	39.0%
2022/23 to 2024/25	**15**	**1,485,793**	**230,040**	**187,015**	**8,909**	**303,050**	**57,822**	**698,969**	**15.5%**	**12.6%**	**0.6%**	**20.4%**	**3.9%**	**47.0%**
2032/33 to 2034/35	**25**	**2,167,872**	**331,638**	**224,334**	**10,800**	**430,395**	**83,442**	**1,087,284**	**15.3%**	**10.3%**	**0.5%**	**19.9%**	**3.8%**	**50.2%**
2042/43 to 2044/45	**35**	**2,849,952**	**433,236**	**261,654**	**12,690**	**557,739**	**109,062**	**1,475,598**	**15.2%**	**9.2%**	**0.4%**	**19.6%**	**3.8%**	**51.8%**

Population (or economy) changes at same rate as present and last years

Scenario 2

Years	Period	Trips/Day	Rail/Tube/DLR	Bus/Tram	Taxi/Other	Car/Motorcycle	Cycle	Walk	Rail/Tube/DLR	Bus/Tram	Taxi/Other	Car/Motorcycle	Cycle	Walk
2008/09 to 2010/11	1	520,500	83,134	131,889	5,184	124,805	17,078	158,409	16.0%	25.3%	1.0%	24.0%	3.3%	30.4%
2009/10 to 2011/12	2	591,900	98,628	141,186	7,050	134,119	27,091	183,826	16.7%	23.9%	1.2%	22.7%	4.6%	31.1%
2010/11 to 2012/13	3	686,100	114,318	144,980	7,808	151,889	30,387	236,725	16.7%	21.1%	1.1%	22.1%	4.4%	34.5%
2011/12 to 2013/14	4	761,000	122,567	143,920	7,016	169,665	34,793	283,046	16.1%	18.9%	0.9%	22.3%	4.6%	37.2%
2012/13 to 2014/15	5	776,990	121,964	149,182	6,146	170,705	26,037	302,956	15.7%	19.2%	0.8%	22.0%	3.4%	39.0%
2022/23 to 2024/25	**15**	**1,485,793**	**230,040**	**187,015**	**8,909**	**168,353**	**148,579**	**742,897**	**15.5%**	**12.6%**	**0.6%**	**11.3%**	**10.0%**	**50.0%**
2032/33 to 2034/35	**25**	**2,167,872**	**331,638**	**224,334**	**10,800**	**126,947**	**325,181**	**1,148,972**	**15.3%**	**10.3%**	**0.5%**	**5.9%**	**15.0%**	**53.0%**
2042/43 to 2044/45	**35**	**2,849,952**	**433,236**	**261,654**	**12,690**	**90,407**	**484,492**	**1,567,474**	**15.2%**	**9.2%**	**0.4%**	**3.2%**	**17.0%**	**55.0%**

New kerbside sustainable policies

Appendix D

Car ownership, access and parking

Private or Light Goods Vehicles per 100 Population (2014)

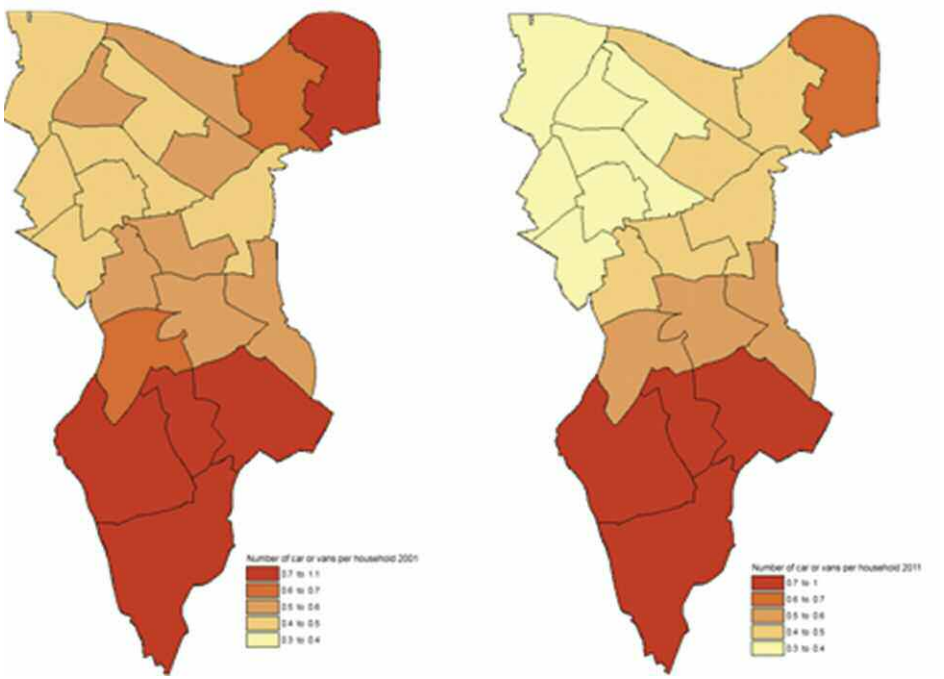
The general trend in London has shown a decline in car ownership levels per household, with an overall 5.1 per cent drop (from 63.5 to 58.4 per cent) across the Capital from the 2001 Census. The fall across the Inner London boroughs has been even more prevalent with a 6.6 per cent drop in car ownership levels to just over 43 per cent by 2011. The map by Urbs.London shows the contrast between levels of car ownership per hundred people between outer London (darker red) and inner London.[13] Southwark has an average of 19 private vehicles per hundred people across the borough.

The graphic is consistent with a 2012 report by the RAC Foundation that showed that Southwark has the 5th least amount of cars per 1,000 head of population of all 348 local authority areas in England and Wales (RAC, 2012). The Census data also showed a drop in the absolute number of cars in the borough by approximately 2,335 despite the 18 per cent increase in population. This trend towards lower car ownership in Southwark is likely to continue as the Council continues to direct high-intensity land uses towards areas served by public transport, quality walking and cycling networks and the increased availability of car clubs, ride-sharing apps and other forms of shared mobility.

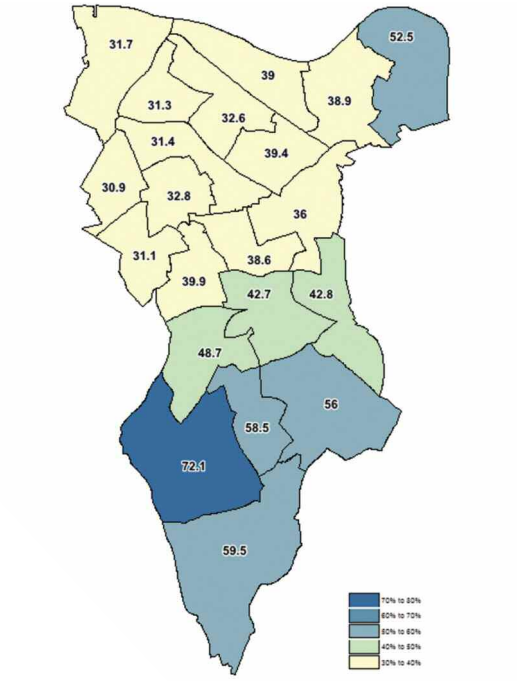
Despite these trends, parking for private vehicles space still dominates much of the available kerbside space in the borough. Demand for on-street parking, particularly in areas without parking zones, often exceeds the supply of safe parking spaces resulting in parking stress and a clear threat to highway safety. Cars parked within the recommended 10m clearway of junctions for example, can obstruct visibility for both pedestrians and motorists at known conflict points. Uncontrolled parking areas are also attractive to commuters from outside of the borough that avail of free parking often at the expense of residents and local traders that rely on the frequent turnover of space to attract shoppers into the area. Providing car parking options can also encourage people to use their vehicles more, therefore creating more traffic and parking congestion. Management of this space in a busy, urbanised, dynamic borough facing a myriad of complex issues relating to public health, road safety, climate change and ever-increasing demands on our public space will be a key tenant of this Strategy.

13 http://urbs.london/car-ownership-reveals-a-tale-of-2-londons/1569

Changes in car ownership in Southwark by ward between 2001 and 2011



Percentage households with access to at least one car by ward 2011



Appendix E

Air quality

Good air quality has long been recognised a basic requirement for good health. The UK Air Quality Standards Regulations 2000 (updated in 2010) set standards for a variety of pollutants that are considered harmful to human health and the environment. These are based on EU limit values and are for a range of air pollutants. A 2015 report from Kings College suggests that exposure to air pollution was directly attributable to 9,416 early deaths in London in 2010. The premature deaths are due to two key pollutants, fine particulates known as PM2.5s and the toxic gas nitrogen dioxide (NO2) caused primarily by diesel cars, HGVs, LGVs and buses, on our streets. Long term exposure to air pollution increases the risk of lung cancer, impairs child lung development and increases the risk of hospitalisation among people with a pre-existing lung condition (Watkins et al, 2015).

Southwark's road transport emissions are amongst the highest in London. The majority of Southwark, with the exception of the area the south of the A205, is covered an Air Quality Management Area (AQMA) designation and there are a number of sites that exceed legal levels of NO2 (Southwark Air Quality Action Plan, 2013).[14] The area has been identified as being particularly polluted, largely due to heavy traffic, coming from both from within the borough and the rest of London.

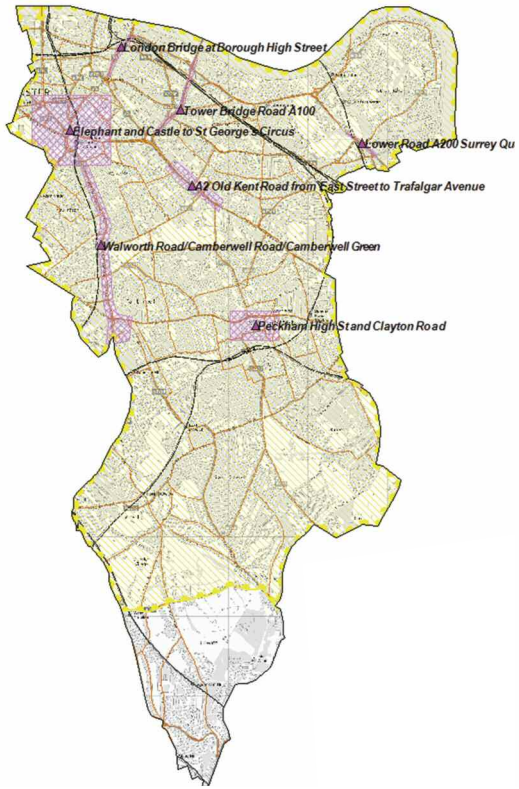
Within the AQMA, there are a number of Greater London Authority designated Air Quality Focus Areas:

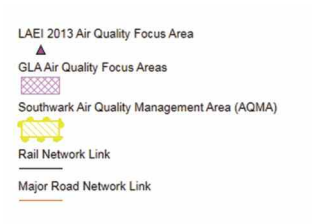
- London Bridge at Borough High Street
- Tower Bridge Road A100
- Lower Road A200 Surrey Quays
- Elephant & Castle to St George Circus
- Old Kent Road from East Street to Trafalgar Avenue
- Walworth Road/Camberwell Road/Camberwell Green
- Peckham High Street

Given our responsibilities for public health, we are working with a wide range of stakeholders including TfL and neighbouring borough's to tackle poor air from traffic and transport through a number of different initiatives. This will primarily focus on continued modal shift from private vehicles to walking, cycling and public transport but will also include shared mobility, tree planting and other forms of green infrastructure. The reallocation of kerbside space will play a key role in facilitating this change.

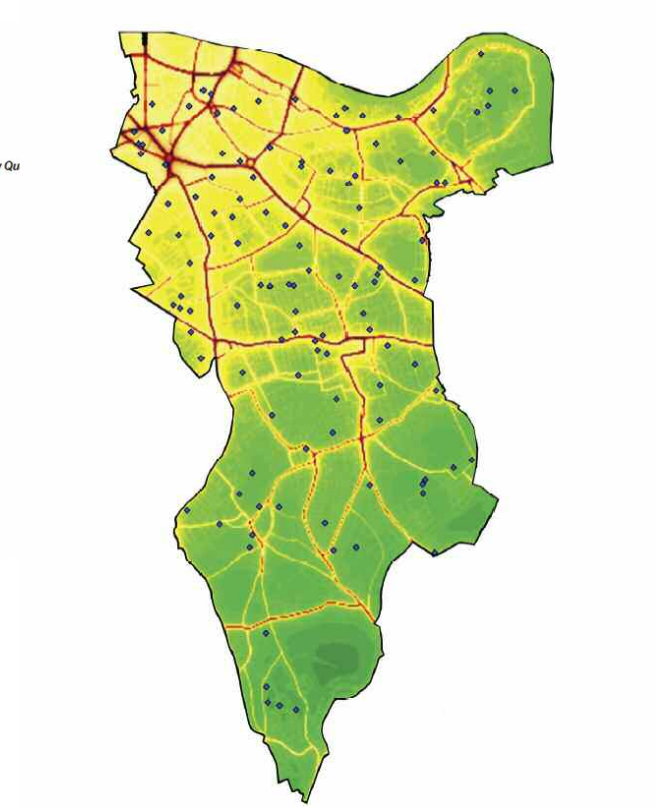
14 The Air Quality Management Area (AQMA) is a defined geographic area that does not meet the national air quality objectives. In Southwark, the AQMA covers the entire area north of the South Circular Road.

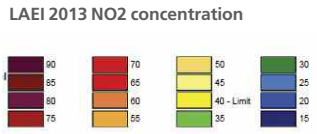
Air quality focus areas





Southwark educational establishments and air quality





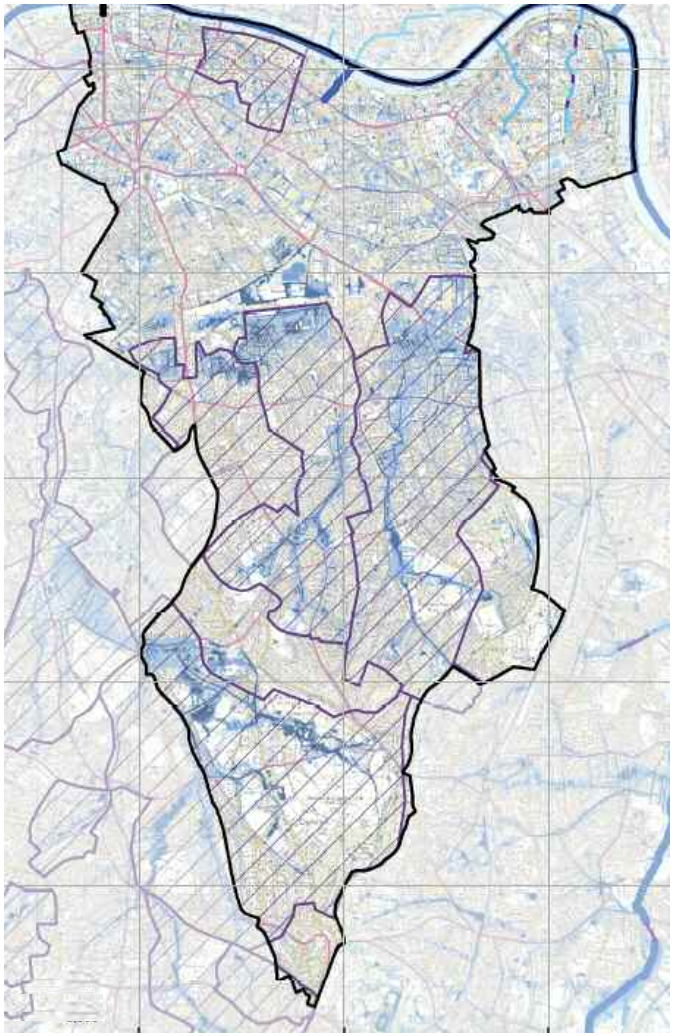
Establishment Name (Secondary Schools)	NO2 Annual Mean 2013 (ug/m3)
Notre Dame Roman Catholic Girls' School	55.9
St Saviour's and St Olave's Church of England School	54.9
Ark All Saints Academy	44.6
Sacred Heart Catholic School	44.5
Ark Globe Academy	43.5
Ark Walworth Academy	43.3
Harris Academy Peckham	42.6
University Academy of Engineering South Bank	41.7
Harris Academy Bermondsey	40.7
City of London Academy (Southwark)	40.5
Harris Boys' Academy East Dulwich	39.7

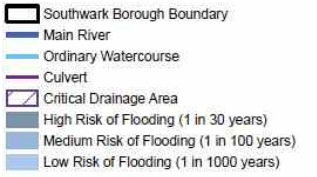
Establishment Name (Primary Schools)	NO2 Annual Mean 2013 (ug/m3)
St George's Cathedral Catholic Primary School	64.3
St Jude's Church of England Primary School	55.6
Tower Bridge Primary School	55.0
Saint Joseph's Catholic Primary School, the Borough	53.2
The Cathedral School of St Saviour and St Mary Overy	51.4
Charlotte Sharman Primary School	51.1
Townsend Primary School	50.2
Grange Primary School	49.9
Victory School	49.7
Charles Dickens Primary School	49.0
Friars Primary Foundation School	47.8
St John's Walworth Church of England Primary School	47.8
St James' Church of England Primary School	46.6

Appendix F

Surface water flooding

Surface water flooding and Critical Drainage Areas in Southwark





Pluvial or surface water flooding occurs when high intensity rainfall generates runoff which flows over the surface of the ground and creates pools of water (or ponding) in low lying areas. This is particularly likely to happen in built up areas as paved surfaces cannot absorb any of the rainfall. Surface water flooding is the main form of flooding likely to affect the majority of residents in the borough but until recently hadn't been well understood. The borough suffered serious flooding events in 1984, 2004 and 2007 with the Herne Hill and Dulwich areas particularly affected.

Within Southwark, there are 5 Critical Drainage Areas that the Council is the responsible Lead Local Flood Authority for:

- London Bridge
- Camberwell
- Central Southwark
- East Southwark
- Herne Hill (responsibility shared with LB Lambeth)

Many of these areas are dominated by hard-standing areas that contribute to surface run-off and exacerbate issues of localised flooding. Softer landscaping including features such as tree planting and other green infrastructure, Sustainable Urban Drainage Systems (SuDs) and permeable paving in these areas will be required to reduce the impact on the water and drainage network in the borough.

Since April 2013, local authorities have responsibility for a wide range of public health issues including reducing obesity, improving air quality and increasing levels of physical activity. The Council has a pressing need to promote active travel as a means of tackling the serious health inequalities within Southwark as identified by the Sustainable Community Strategy, the Joint Health and Wellbeing Strategy and the Council's emerging New Southwark Plan.

Obesity and activity levels

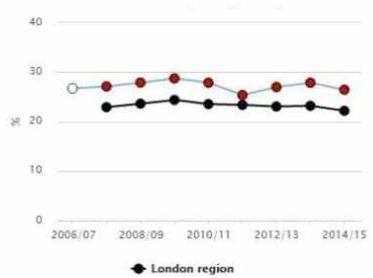
Obesity amongst adults and school children is particular problem in Southwark. A Report by the Greater London Authority in 2013 highlighted the following:

- Southwark's adult obesity rate is 23 per cent. This is higher than the London average (21 per cent)
- Southwark's obesity rate among primary school children (year 6) is 29 per cent. This is significantly higher than the national and London rates (19 and 23 percent respectively).
- 44 per cent of 10-11 year olds in Southwark are classed as being either overweight or obese, which is higher than the London average (37 per cent).
- Only 20 per cent of Southwark's population participate five times per week in physical activity for at least 30 minutes and nearly 60 per cent participate once a week.

The Council will work closely with our colleagues in the NHS and use our new public health duties to tackle health inequalities including obesity, mental health and exposure to poor air quality. Ensuring that our public realm is age-friendly and encourages more active travel modes including walking, cycling and jogging for example, is a key objective for the Kerbside Strategy.

Child excess weight in 4-5 and 10-11 year olds - 4-5 year olds

Southwark | Proportion - %



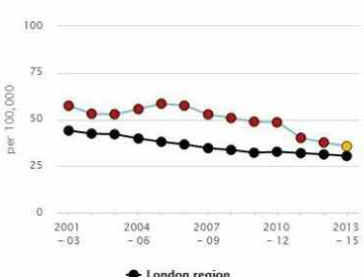
Recent trend:

Period		Count	Value	Lower CI	Upper CI	London	England
2006/07	○	595	26.7	24.9	28.6	-	22.9
2007/08	●	680	27.1	25.4	28.9	22.9	22.6
2008/09	●	674	27.9	26.1	29.7	23.6	22.8
2009/10	●	818	28.7	27.1	30.4	24.3	23.1
2010/11	●	700	27.8	26.1	29.6	23.5	22.6
2011/12	●	681	25.3	23.7	27.0	23.3	22.6
2012/13	●	678	27.0	25.3	28.7	23.0	22.2
2013/14	●	834	27.8	26.2	29.5	23.2	22.5
2014/15	●	812	26.4	24.9	28.0	22.2	21.9

Source: Health and Social Care Information Centre, National Child Measurement Programme

Under 75 mortality rate from respiratory disease (Persons)

Southwark | Directly standardised rate - per 100,000

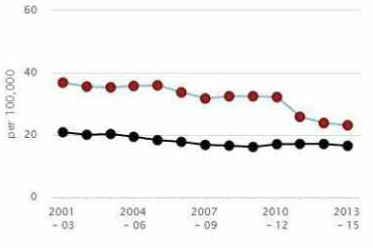


Recent trend: –

Period		Count	Value	Lower CI	Upper CI	London	England
2001 - 03	●	225	57.3	50.0	65.5	44.0	40.5
2002 - 04	●	206	53.0	45.9	61.0	42.4	39.8
2003 - 05	●	201	52.8	45.6	60.8	42.0	39.4
2004 - 06	●	209	55.5	48.1	63.8	39.8	37.6
2005 - 07	●	219	58.4	50.7	66.9	38.0	37.1
2006 - 08	●	216	57.4	49.7	65.8	36.6	36.5
2007 - 09	●	200	52.7	45.4	60.8	34.6	36.0
2008 - 10	●	189	50.8	43.5	58.8	33.7	35.3
2009 - 11	●	184	48.8	41.7	56.7	32.1	34.2
2010 - 12	●	180	48.4	41.3	56.3	32.6	33.5
2011 - 13	●	156	40.1	33.8	47.2	31.9	33.2

Under 75 mortality rate from respiratory disease considered preventable (Persons)

Southwark | Directly standardised rate - per 100,000

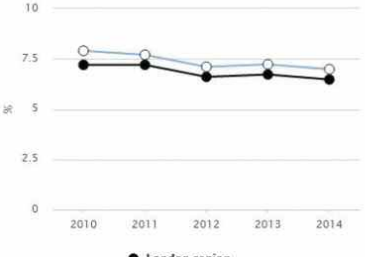


Recent trend: –

Period		Count	Value	Lower CI	Upper CI	London	England
2001 - 03	●	136	36.9	30.9	43.6	20.9	20.4
2002 - 04	●	130	35.6	29.7	42.3	20.1	19.7
2003 - 05	●	128	35.3	29.4	42.1	20.3	19.4
2004 - 06	●	128	35.8	29.8	42.6	19.4	18.2
2005 - 07	●	129	36.0	29.9	42.8	18.3	18.0
2006 - 08	●	121	33.7	27.9	40.4	17.8	17.9
2007 - 09	●	115	31.7	26.1	38.2	16.8	17.6
2008 - 10	●	114	32.5	26.7	39.1	16.6	17.4
2009 - 11	●	116	32.5	26.7	39.1	16.2	17.2
2010 - 12	●	112	32.2	26.4	38.9	17.1	17.6
2011 - 13	●	93	25.8	20.7	31.8	17.1	17.9

Fraction of mortality attributable to particulate air pollution

Southwark | Proportion - %



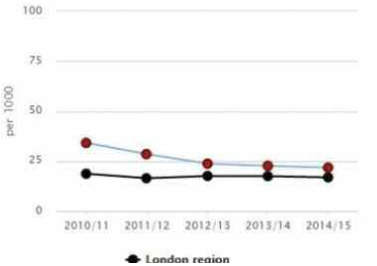
Recent trend: –

Period		Count	Value	Lower CI	Upper CI	London	England
2010	○	-	7.9	-	-	7.2	5.6
2011	○	-	7.7	-	-	7.2	5.4
2012	○	-	7.1	-	-	6.6	5.1
2013	○	-	7.2	-	-	6.7	5.3
2014	○	-	7.0	-	-	6.5	5.1

Source: Background annual average $PM_{2.5}$ concentrations for the year of interest are modelled on a 1km x 1km grid using an air dispersion model, and calibrated using measured concentrations taken from background sites in Defra's Automatic Urban and Rural Network (http://uk-air.defra.gov.uk/interactive-map.) Data on primary emissions from different sources and a combination of measurement data for secondary inorganic aerosol and models for sources not included in the emission inventory (including re-suspension of dusts) are used to estimate the anthropogenic (human-made) component of these concentrations. By approximating LA boundaries to the 1km by 1km grid, and using census population data, population weighted background PM2.5 concentrations for each lower tier LA are calculated. This work is completed under contract to Defra, as a small extension of its obligations under the Ambient Air Quality Directive (2008/50/EC). Concentrations of anthropogenic, rather than total, PM2.5 are used as the basis for

The rate of complaints about noise

Southwark | Crude rate - per 1000



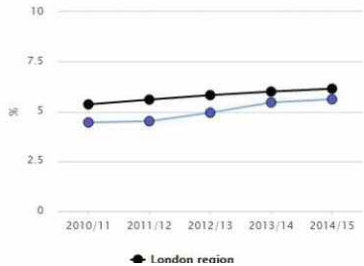
Recent trend:

Period		Count	Value	Lower CI	Upper CI	London	England
2010/11	●	9,664	34.1*	33.4	34.7	18.6	7.8
2011/12	●	8,221	28.5	27.9	29.1	16.4	7.5
2012/13	●	6,951	23.7	23.1	24.2	17.5	7.5
2013/14	●	6,741	22.6*	22.0	23.1	17.4	7.4
2014/15	●	6,571	21.7*	21.2	22.3	16.8	7.1

Source: Data collated by CIEH on number of noise complaints. Extrapolation determined by DEFRA in association with CIEH. Indicator value calculated by CIEH and Public Health England Knowledge & Intelligence Service (Epidemiology & Surveillance).

Recorded diabetes

Southwark | Proportion - %



Recent trend:

Period		Count	Value	Lower CI	Upper CI	London	England
2010/11	●	12,262	4.4	4.4	4.5	5.4	5.5
2011/12	●	12,689	4.5	4.4	4.6	5.6	5.8
2012/13	●	13,786	4.9*	4.9	5.0	5.8	6.0
2013/14	●	14,196	5.5	5.4	5.5	6.0	6.2
2014/15	●	14,837	5.6	5.5	5.7	6.1	6.4

Source: Information centre for health and social care (IC). QOF information is derived from the Quality Management Analysis System (QMAS), a national system developed by NHS Connecting for Health.

Appendix H

Highway safety

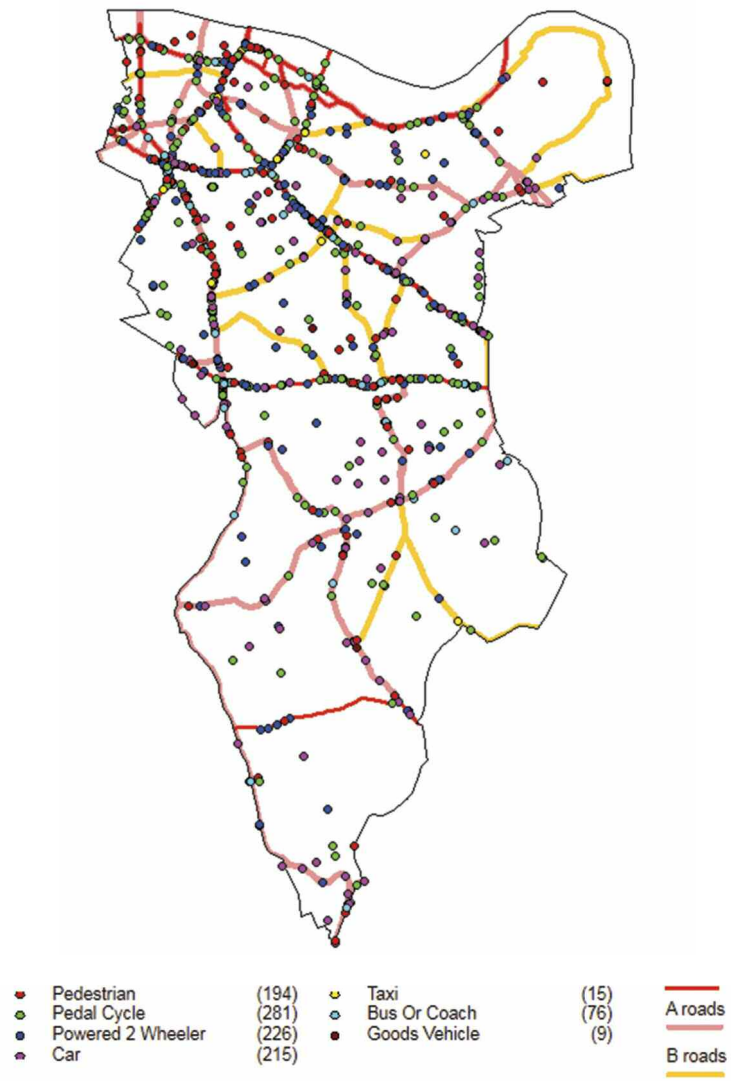
The effective management of kerbside space has an important role in road traffic collision prevention and reduction. This can include the introduction of measures to improve pedestrian visibility at junctions and crossing points and preventing obstructive parking in areas where it is considered to contribute to an unsafe environment. Collisions involving pedestrians and cyclists tend to be more severe than other modes -50 per cent of people killed on London's roads interventions are pedestrians.

We are required by the Mayor of London's Transport Strategy to achieve measurable reductions in road casualties and to help make all modes of transport safer. However, collisions in the borough are still far too high with 1018 casualties recorded in Southwark in 2015 of which 89 resulted in fatality or serious injury. Many of these casualties and near misses are clustered around junctions on key arterial roads on the TfL-controlled network such as Peckham Road, the Old Kent Road, Elephant and Castle and Tower Bridge Road. However, there are significant collision clusters on borough controlled roads including Walworth Road, Camberwell Road and the Surrey Quays area.

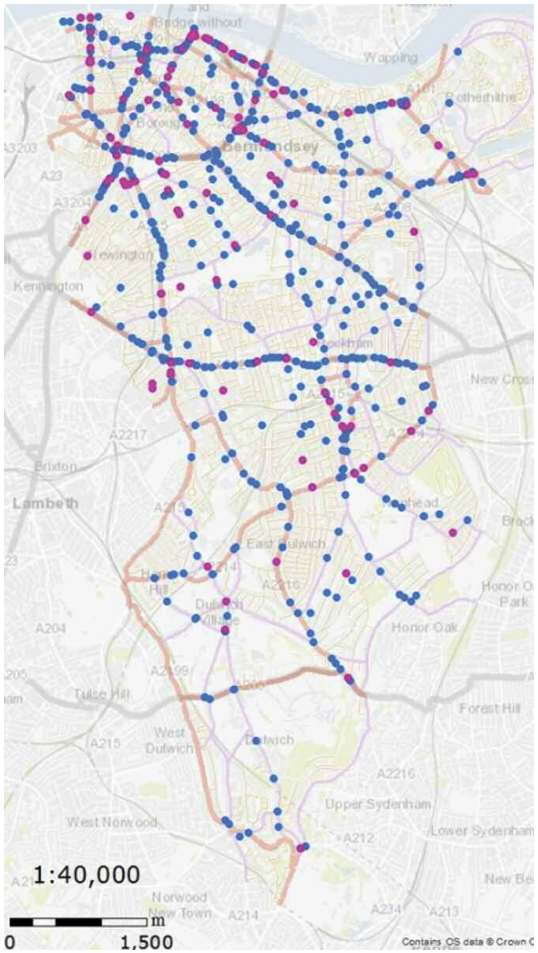
Tackling the source of this problem often requires a redesign of the street to enhance the pedestrian and cyclist environment through reductions in vehicular traffic speeds and volumes. The adopted Cycling Strategy has set a 3 stage target for reducing collisions in the borough with a long term Vision Zero target in cycling and pedestrians casualties.

Using the kerbside space to effectively to calm traffic and humanise the street is a key outcome of this Strategy.

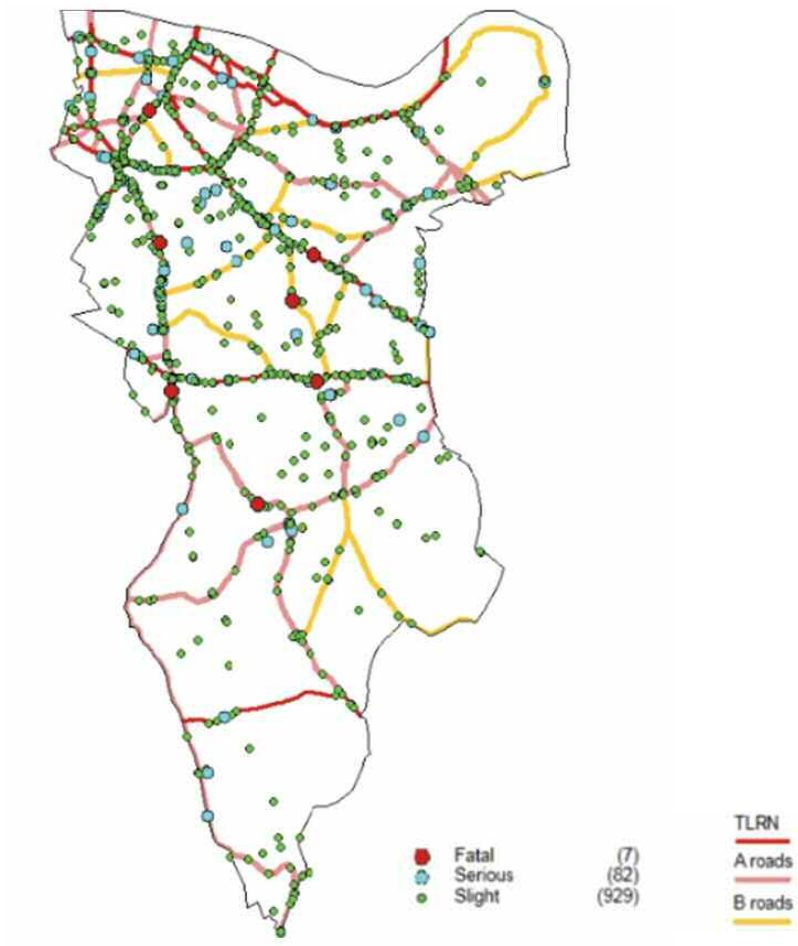
2015 Casualties in Southwark by mode of travel



Southwark cyclist casualties and near misses



2015 Casualties in Southwark by severity



Case Study 1:

Positive impact of walking and cycling on the local economy, New York

Interventions into the kerbside space to favour walking, cycling, and public transport have proven to be very successful in improving the vibrancy and vitality of city streets and public spaces. In recent years, New York City's Department of Transportation (NYC DOT) in particular have an enviable reputation for successfully trialling low cost interventions in the public realm under the City Plaza programme.

One of their most successful trials included the 'Broadway Boulevard' project. Prior to the trial, Broadway was congested with vehicles. Too many pedestrians were forced onto narrow pavements resulting in pedestrians unsafely walking on the carriageway and an unpleasant working and shopping environment.

NYC DOT determined that reconfiguring this corridor to favour pedestrians would result in safety, liveability, and mobility benefits. The study predicted that removing vehicle traffic lanes, limiting turns, and closing the entire street to vehicles in places would provide much needed pedestrian infrastructure and actually reduce gridlock and improve area-wide travel times. (Project for Public Space, 2016). Beginning in 2009, New York City made changes to the design of Broadway and nearby streets, initially with temporary low-cost treatments, and then with permanent designs once the benefits of the changes had been confirmed. One such scheme that resulted in an expansion of the pedestrian area at Union Square produced the following results:

- Commercial vacancies reduced by 49% (compared to 5% more borough-wide)
- Speeding decreased by 16%
- Injury crashes decreased by 26%
- 74% of users preferred the new extended square

Other similar NYC DOT interventions across New York resulted in the following:

- Transforming an underused parking area in Pearl Street, Brooklyn resulted in a 172% increase in retail sales (at locally-based businesses, compared to 18 per cent borough-wide)
- Making bus routes work better in Fordham Road, Bronx resulted in a 71 per cent increase in retail sales (at locally-based businesses, compared to 23 per cent borough-wide)
- Dedicated lanes for both buses and bikes in First and Second Avenue, Manhattan 47 per cent fewer commercial vacancies (compared to 2 per cent more borough-wide)

Case Study 2:

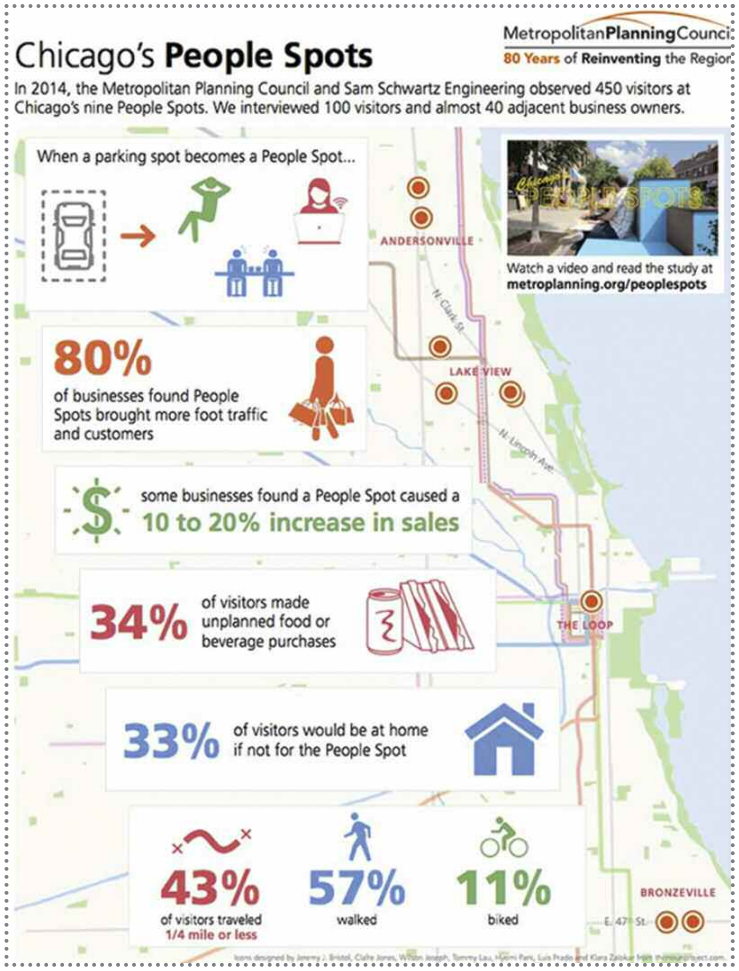
Parklets

Parklets are loosely based on an original concept known as Park(ing) Day which was started in 2005 by the San Francisco based artist group Rebar to highlight a lack of open spaces in the city. The Park(ing) Day process involves the suspension of existing parking bays for a day and transforming the bays into a temporary park or social space to demonstrate the need for better streets and public spaces.

Since then, the parklet concept has spread across North American cities in various guises including People Spots (Chicago), Pavement to Parks (San Francisco) and since adopted in New York, San Diego, Philadelphia and Vancouver.

Evidence collected from US cities and the UK suggests that:

- Parklets generate more footfall and encourage people to visit local businesses. In Chicago, about 80 per cent of businesses reported more footfall with a third of parklet users (People Spots) said they would probably be at home if the spot wasn't there suggesting that it generated new walking trips.
- Visitors to parklets spend more. In New York, new kerbside parklet spaces were attributed to an increase of 14 per cent in revenue for businesses fronting them. In Chicago, studies showed the figure to be 10-20 per cent and Philadelphia 20 per cent. In Hackney, a local café owner found that visitors made more unplanned purchases.
- Parklets are for everyone. In Chicago, a relatively even number of male and female visitors suggested that women felt comfortable using these new public spaces. (Citylab, 2015) By providing more street seating they can also ensure older people feel more comfortable. An Age UK report stated "public seating for older people can make the difference between living a full life and cut off and isolated" (2011 Pride of Place).



Case Study 3:

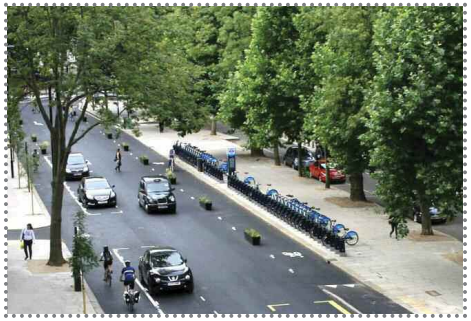
Temporary cycle lanes, New York and Camden

A number of highway authorities across the world have trialled cycle lanes through the use of low cost light segregation techniques, typically involving the use of temporary materials such as traffic wands and rubber kerbs to separate people driving from those on cycles.

In 2008, the New York City Department of Transport undertook a three month trial of a new cycle lane on Ninth Avenue running across seven blocks using concrete dividers, planters and a row of parked cars to shield it from cars and other larger vehicles.

The trial proved so successful in terms of significantly improving local economic performance, cycling levels and reducing collisions that the lane became permanent over the next three years. The cycle lane led to 49 per cent increase in retail sales (locally-based businesses on 9th Ave from 23rd to 31st Streets), compared to 3 per cent borough-wide (NYC DOT, 2012).

In London, Camden undertook a similarly successful light segregation trial on Royal College Street in August 2013. This led to a 49 per cent increase in cycling by 2014 on the new route from the baseline figure of 2011 (Sustrans, 2014). The trial has since been refined, adapted and extended further to cover Kentish Town, Kings Cross and Regents Park.



Case Study 4:

Last mile delivery management and the Cargohopper, Utrecht

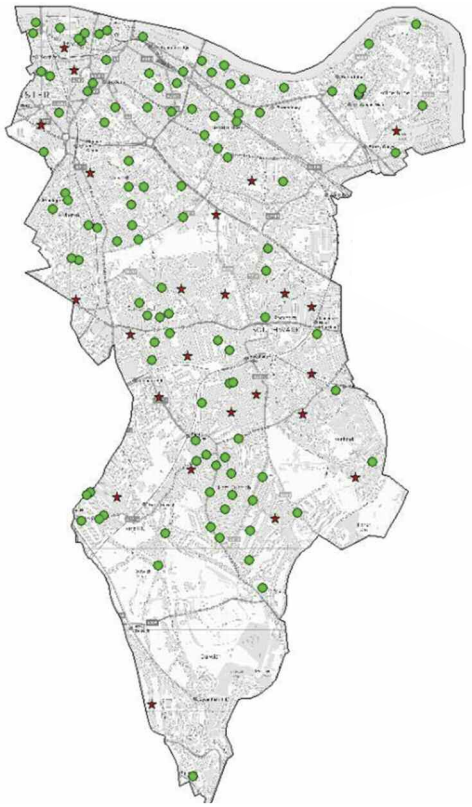
In order to minimise local pollution and avoid damage by heavy vehicles to its historic city centre, the Dutch city of Utrecht produced a freight distribution plan in 2008 as part of the EU CIVITAS MIMOSA project. Measures to improve freight logistics with the involvement of and co-operation between companies were put in place, including time restrictions for vehicles entering the city, more use of the city's canals to reduce road based freight transport and the designation of low-emission zones.

One of the key interventions included a Cargohopper –an electric powered delivery vehicle. The CO2-neutral , €60,000 multi-trailer is owned and operated by a private transport company, the Utrecht-based Hoek Transport, and moves cargo twice a day making about 40-50 parcel deliveries each day. In August 2009 it was made into an even more sustainable form of freight transport and transformed into a solar-powered vehicle. Six solar panels were installed on the roofs, costing a total of € 15,000 (ELTIS, 2016).

From a consolidation centre outside the city centre, the electric delivery van continues with deliveries to shops inside historic centre and pedestrian area. Once empty, it collects from shops dry waste, in particular paperboard, paper and empty packaging, for recycling in order to take advantage from the homeward journey. During the lifetime of the project, resulted in a 73 per cent (5.8 t) reduction in CO2 emissions, a 56 per cent (0.001 t) decrease in PM10 emissions; and a 27 per cent (0.005 t) fall in NOx emissions. Noise levels in the city also fell improving the liveability of Utrecht.

The project was so successful that in April 2011, a Cargohopper 2 was introduced that can in addition to delivering parcels, it can now also move pallets and other long objects, and can travel 250 km without recharging. The scheme has proven so successful that the concept has also been adopted in the much larger city of Amsterdam.

Case Study 5:



● Car club sites
★ Planned car club sites

Car clubs, London

The use of car clubs and other forms of other shared mobility has been steadily growing in London with companies like Zipcar, City Car and Co wheels now firmly established as part of the Capital's mobility mix. Car club charity Carplus predict a further 10-fold rise in car club membership in London by 2020 to account for a total membership of 1 million people, based on an expanding the range of available car sharing models including flexible car clubs such as Drive Now and Autolib. The rise of the sharing economy as well as well as evidence from countries such as Germany, Austria and Switzerland, indicate significant untapped potential of car clubs to reduce the impacts of car traffic, support walking and cycling and facilitate modal integration (Carplus, 2016).

There is credible evidence to suggest that the increased availability of car clubs leads to a reduction of private car ownership in London. A recent survey undertaken by Steer Davies Gleave in London (2016) suggests that 10.5 private cars (22,550 cars in total) are removed from London's roads for each car club vehicles as users' dispose of their cars. Furthermore, a third of round-trip car club members reported that they would have bought a private car had they not joined a car club meaning a deferred purchase of a further 54,400 cars or 22 cars per car club vehicle. The space left over from a drop in demand for private parking could potentially free up free up kerbside space for other interventions including tree planting, cycle parking and street seating

Car clubs also tend to be greener than private cars as vehicles are updated more frequently and the percentage of electric vehicles within fleets grows in line with the requirements for the ULEZ in 2020. Newcomers to the London market such as Autolib (Blucity) already operate completely on electric vehicles.

The Council has long supported the use of car clubs and other forms of shared mobility vehicles in Southwark as a means reducing the number of privately owned cars in the borough but enabling access to a vehicle for those that need one on occasion, for example making a weekly shopping trip, picking up a relative or moving house. The most recent Carplus figures from January 2015 showed that there are 128 car club bays in Southwark (115 on-street plus 13 off-street) and 8,587 members with our existing operator Zipcar. We expect these figures to rise in line with legal agreements for car clubs signed for major planning developments at Elephant and Castle and Canada Water for example.

Southwark 2016 zipcar

Key Stats	
9,548	Members
125	Parking bays

Summary

We continue to see strong performance in Southwark as we start the year, impressively membership has grown by 10% YoY. Utilisation is at an average 7 hours a day across the borough. Our focus continues to be on growing awareness of car sharing across London.

Change in Car Ownership (from CarPlus annual survey)	
47%	of Zipcar Southwark members have sold at least one private vehicle since joining
1,075	Vehicles taken off the road in Southwark
42%	of Zipcar Southwark members deferred or cancelled purchasing a car since joining
2,475	Additional planned vehicle purchases were deferred or cancelled

Locations Detail	
Commercial	n/a
Council	112
Development	11
Private	2