



OLD KENT ROAD

Surface Transport Study

Final Report

September 2016



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**Allies and Morrison
Urban Practitioners**

OLD KENT ROAD Surface Transport Study

Final Report

September 2016

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Executive Summary

Steer Davies Gleave (SDG) and Allies and Morrison Urban Practitioners (AMUP) have been commissioned by Transport for London (TfL) to undertake the Old Kent Road Surface Transport Study, which consists of developing a series of integrated urban design and movement interventions for the Old Kent Road corridor. This study has developed series of corridor-wide and location-specific surface transport interventions at a concept level, informed by the current and future functions of the corridor. This report sets out the findings of the study.

Old Kent Road Opportunity Area

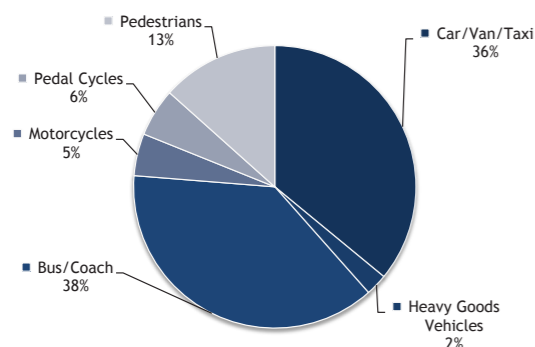
The Old Kent Road corridor falls within the Old Kent Road Opportunity Area (OA), which will accommodate significant growth over the next 20 years. The provision of at least 20,000 new homes and 5,000 new jobs is expected to be accompanied by the restoration of the Old Kent Road corridor as a thriving high street with shops, business space, leisure, civic, cultural and community uses. This change will be driven by the outwards expansion of central London and the construction of the Bakerloo line extension (BLE).

The London Borough of Southwark (LBS) is currently preparing an Area Action Plan (AAP) for their section of the OA, setting out a vision for the. In support of the AAP, TfL have undertaken a Strategic Transport Study (STS), which assesses transport impacts of planned growth, and recommends the transport improvements necessary to enable this. In contrast, this report focuses specifically on surface transport.

The corridor today

The Old Kent Road corridor is a major radial route linking central London with areas to the south east that forms part of the A2 corridor. It is designated as a

Average AM peak hour corridor mode split (people/passengers)



‘red route’, being part of the Transport for London Road Network (TLRN). It is an important transport corridor, catering for movement by a wide range of modes as shown in the graph above.

However, the corridor currently has a number of issues and challenges relating to surface transport, including:

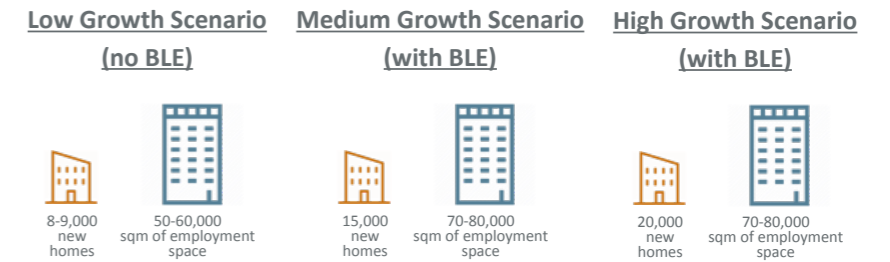
- > Limited footway space at key locations, and poor provision for pedestrian crossing which creates severance
- > Whilst there are high cycle flows, this is despite a general lack of cycle facilities, leading to conflicts with other road users and a fifth of recorded collisions involving cycles
- > The nearest rail stations are some distance away, meaning that public transport services are solely provided by buses
- > There are high levels of bus patronage through the day, with overcrowding occurring during peak periods; whilst there are intermittent bus lanes, these are not continuous
- > There are few alternative radial routes for traffic, and the road environment (in terms of layout and number of lanes) is inconsistent
- > Motorcycles form a relatively high proportion of traffic along the corridor
- > The quality of the public realm varies along the corridor, with the public realm poorly enclosed by buildings (particularly towards the eastern end of the corridor)
- > Historic buildings constrain road width

The corridor in the future

Whilst the BLE will be a primary enabler of growth in the OA, surface transport also has a key role to play, in particular before the BLE is completed. In order to support and facilitate growth, the future Old Kent Road corridor is envisaged as a modern boulevard with improved public realm for pedestrians, protection for cyclists and improved bus infrastructure along its entire length served by new open spaces and green links.

The location and quantum of development associated with the OA will create new pressures on the corridor but are also likely to open up opportunities to rethink the layout of the corridor and priority of modes. There are currently three main development scenarios that are being considered, as shown in the adjacent diagrams. The key difference between them is that whilst the low growth scenario assumes that there will not be a BLE, the medium and high growth scenarios assume that the BLE will be in place.

In order to understand future movement patterns associated with each growth scenario, TfL have completed strategic transport modelling. Some of the key findings are:



- > Total transport demand in the area increases significantly
- > The bulk of this absolute increase is predicted to be for public transport trips and non-mechanised (walking and cycling) trips, with a smaller increase in vehicle trips
- > For the low growth scenario (without the BLE), the modelling results suggest a significant increase in the volume of bus demand; in the medium and high growth scenarios, there are even higher increases in public transport demand, although much of this is served by the BLE

All of the growth scenarios will result in a very significant increase in the demand for movement in the area, and this growth is especially large in the high growth scenario. In terms of individual modes, there will need to be a focus on catering for walking and cycling trips, both as primary modes of transport and as a means of access to public transport services. Given the increasing relative importance of public transport (compared to private vehicle trips), this suggests that increasing a greater focus on public transport movement is necessary in order to facilitate future development.

Surface transport concept interventions

The growth in houses and jobs planned around Old Kent Road will increase the level of activity on the corridor significantly. It is therefore important for severance to be reduced and for the place function of the corridor to be enhanced in order to support development of the OA. In addition, Old Kent Road will continue to be an important movement corridor, encompassing both its current movement role and catering for movement needs associated with growth.

Taking into account these considerations, a range of concept interventions has been developed that demonstrates various possibilities for responding to the future aspirations for the corridor. These have been organised under three headings:

- > Corridor: These primarily respond to movement needs, and have been developed at a corridor-wide level to provide a coherent route for movement along the length of the corridor.
- > Places: The character of the corridor will not be uniform along its length, but will rather consist of a string of places and moments. A number of key places have been identified, with interventions that respond to and support the planned mix and form of development in these areas.
- > Stitches: At key points, new routes and interventions will stitch the two sides together and create clear moments. New routes will be forged to physically link areas north and south of the road and supporting east-west routes will be reinforced to ease the operation of the Old Kent Road as a high street.

A series of principles has also been developed to inform the overall approach to the development of interventions for the corridor:

- > The Old Kent Road becomes the join rather than the barrier
- > The corridor is the focus of activity and interchange
- > The streetscape has a well-defined character and rhythm
- > Movement along and across the corridor is maintained and enhanced
- > Capacity for general traffic is generally maintained
- > Public transport, walking and cycling have priority at key junctions

Four alternative corridor options have been developed (as illustrated in the adjacent cross-sections), representing varying degrees of intervention and different emphases:

- > Incremental improvements: This represents a do-minimum option, focusing on improving continuity of bus lanes, and widening them to accommodate cycles. It is the least complex to implement, but does not fully resolve bus / cycle conflicts.
- > Enhanced cycle provision: Two sub-options are shown, one that includes one-way cycle lanes, and the other with a two-way cycle track on the north side of Old Kent Road. Segregation would be provided between cycles and other road users, but there could potentially be complex layouts at junctions.
- > Enhanced bus provision: This would provide a fully segregated Bus Rapid Transit (BRT) in the centre of the road. This would improve bus priority, but is likely to be to most complex to implement.

Whilst some of the interventions proposed represent complex interventions that could take a number of years to implement, some elements of the identified interventions could be implemented in the short term.

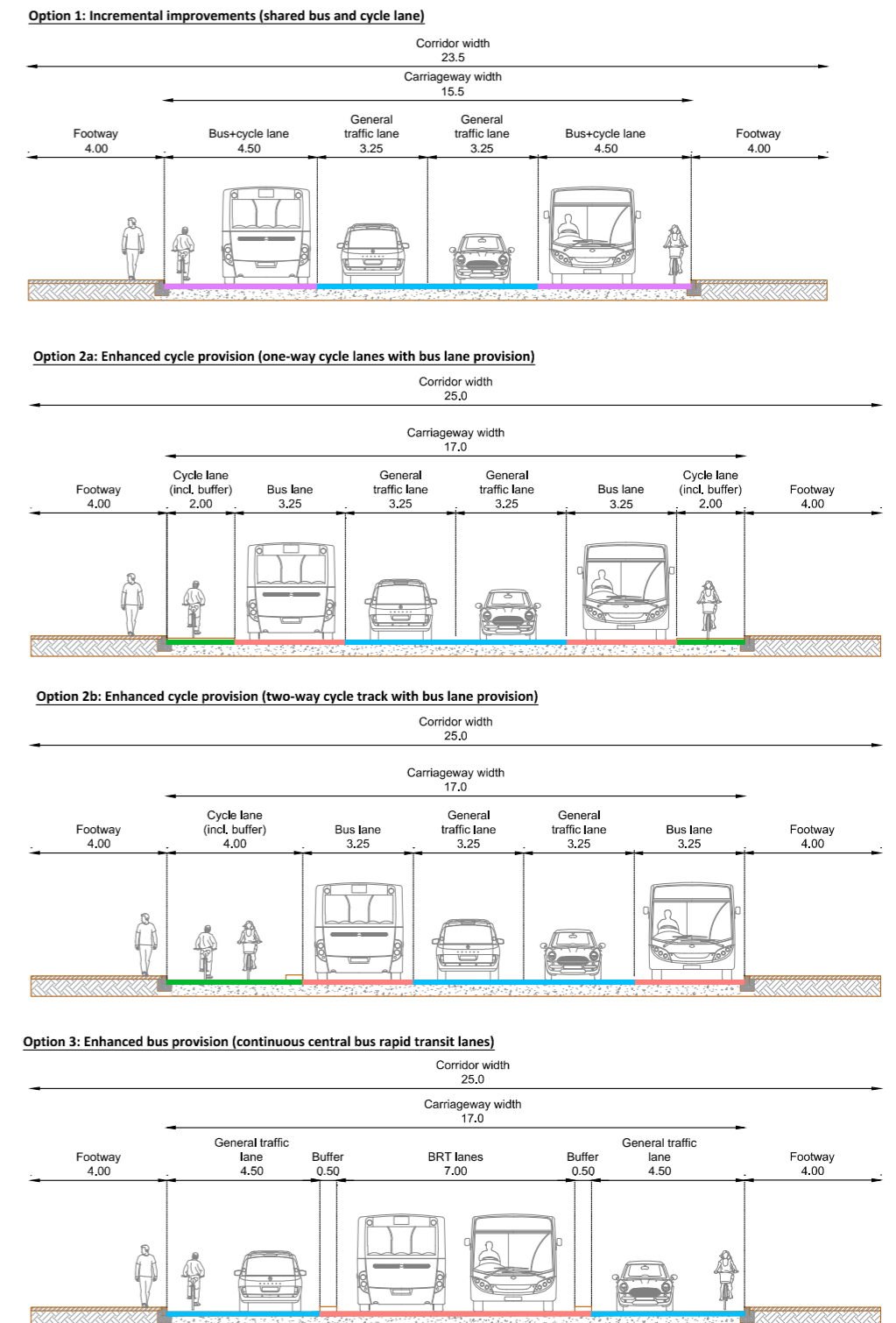
However, there are a number of wider constraints that may impact on the implementation of any interventions, and that will need to be considered as part of further work. These include:

- > Finite space, constrained by existing buildings and infrastructure
- > The need to minimise severance
- > How the Old Kent Road corridor fits into wider movement networks
- > Funding sources and availability
- > Programme for surrounding development

Conclusions and next steps

By examining movement issues relating to the Old Kent Road corridor (both now and in the future), this study has found that it serves a very wide range of movement needs, and that the demand for movement in the area will increase significantly. However, consideration of movement also needs to be balanced with the ambition of making Old Kent Road a better place, that can be a focus of activity and links the community.

Whilst we have identified a range of concept interventions that respond to these considerations, they will require further development, and the corridor-wide interventions in particular may take some time to translate into reality. The timing of their implementation will therefore need to be considered vis-à-vis the likely progress of surrounding developments and the BLE. It may be the case that interim interventions are needed to ensure that the surface transport system does not lag behind development.



Bricklayers Arms
(subject to a separate study)

Burgess Park

Old Kent Road

New Cross Road

Mandala Way

East Street

Surrey Square

Dunton Road

Humphrey Road

Albany Road

Trafalgar Avenue

Glengall Road

St James's Park Road

Rotherite New Road

Sandgate Street

Peckham Park Road

Commercial Way

Asylum Road

Liberton Road

Avonley Road

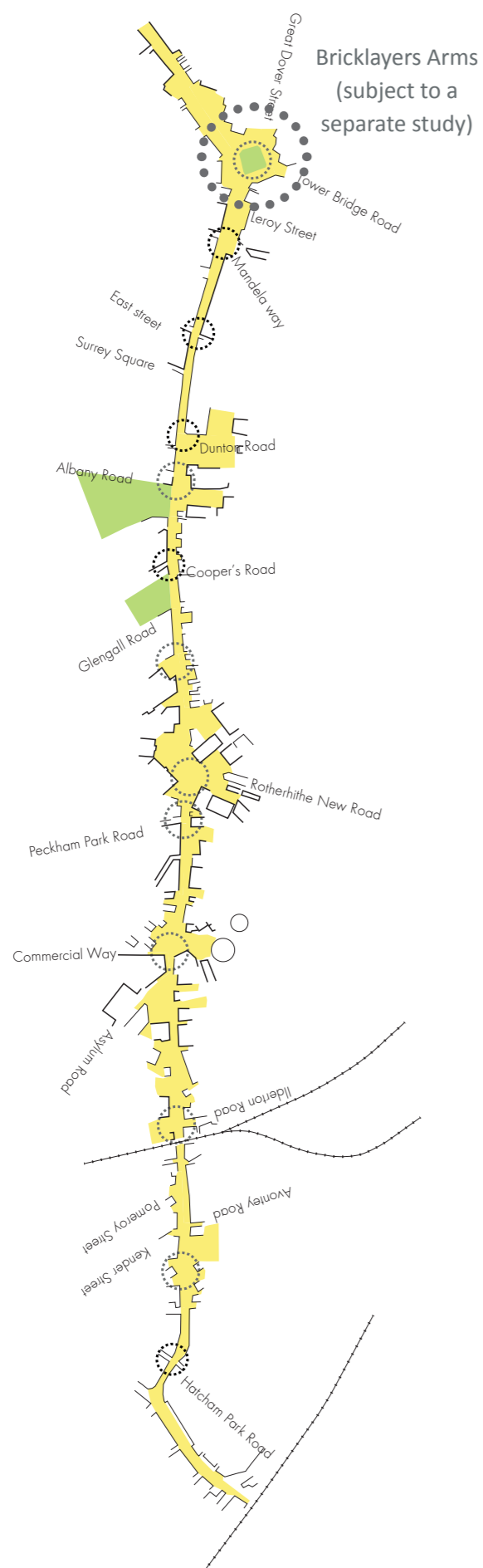
Pomeroy Street

Kender Street

Besson Street

Billington Street





Study area

Introduction

Background and strategic context

Steer Davies Gleave (SDG) and Allies and Morrison Urban Practitioners (AMUP) have been commissioned by Transport for London (TfL) to undertake the Old Kent Road Surface Transport Study, which consists of developing a series of integrated urban design and movement interventions for the Old Kent Road corridor.

The aim of the study is to provide a series of corridor-wide and location-specific surface transport interventions informed by the current and future functions of the corridor. However, this study has only developed the interventions at a concept level, and also presents a number of different options. In order to appropriately identify the most suitable package of surface transport interventions to respond to the needs associated with future development, further work will need to be completed to develop these interventions in more detail.

Old Kent Road Opportunity Area

Old Kent Road was identified as an Opportunity Area (OA) in the Further Alterations to the London Plan (FALP) in January 2014. This will lead to major change in the area, redefining the Old Kent Road as part of central London. This change should result in improvements to the quality of the environment along the road and a change in the distribution of land uses in the area, unlocking central London sites for potential housing growth.

The provision of at least 20,000 new homes and 5,000 new jobs is expected to be accompanied by the restoration of the Old Kent Road corridor as a thriving high street with shops, business space, leisure, civic, cultural and community uses.

In this process the out-of-centre style retail parks and superstores will be replaced with development that provides strong, well-defined street frontages and transition from single use industrial and warehousing uses to mixed use neighbourhoods will be encouraged.

The London Borough of Southwark (LBS) is currently preparing an Area Action Plan (AAP) for their section of the OA, setting out a vision for how the area will change in the future, in order to deliver new homes and jobs. In order to support the AAP, TfL have undertaken a Strategic Transport Study (STS), in order to assess the transport impacts of this planned growth, and recommend the transport improvements necessary to achieve this.

The STS has concluded that an extension of the Bakerloo line will be a primary enabler of the vision set out in the AAP. The “Bakerloo line extension | Options assessment report” indicates that a route to Lewisham, via the Old Kent Road has the strongest case.

The Bakerloo line extension (BLE) will impact further on how people travel in this part of London and will create new opportunities for redevelopment and investment in infrastructure.

As proposals for the BLE are not yet finalised and are continuing to evolve, this study does not take into account considerations such as the exact locations of potential BLE station entries.

Nevertheless, we have considered the potential impact that the BLE could have on surface transport in the area, given that also previous studies such as the Area Action Plan and supporting Placemaking Study have included the two stations in the Opportunity Area scenario planning.

In addition, the potentially long lead time before the BLE is implemented means that much development may proceed ahead of it. Surface transport will therefore be of vital importance during this period.

Report structure

Subsequent to this introduction this report is set out as follows:

- > **Chapter 2:** Old Kent Road Corridor, explores the current function of the corridor, movement patterns and current challenges and opportunities
- > **Chapter 3:** Future Corridor Functions, analyses the levels of growth expected in the future, their potential impact on future trips and patterns of movement and defines a series of high level principles to inform the development of options
- > **Chapter 4:** Corridor Aspirations, considers a number of concept surface transport interventions that respond to the aspirations of the area, as well as future movement patterns
- > **Chapter 5:** Conclusions and Next Steps, summarises the findings of the study and next steps in terms of incorporating the options into policy

Historic context

The Old Kent Road is an historic London high street recognisable across the world due to its place as a low value asset on the Monopoly board. Parts of the road continue to have a high street character, along other stretches there are larger retail premises as well as housing estates, green spaces and civic and educational uses. The hinterland on either side of the road is a mix of industrial and community uses and housing.

Evolution

All places are shaped by their past; the Old Kent Road more than most. In terms of London's growth the area was late to urbanise, but it has a long history stretching back almost two thousand years, to the Roman occupation and the origins of Watling Street.

The Old Kent Road was a former area of marshland and liable to flooding due to its location adjacent to the River Thames floodplain. The underlying geology consists of alluvial silts and overlying sand and gravel deposits, with lower lying marshes and mud-flats.

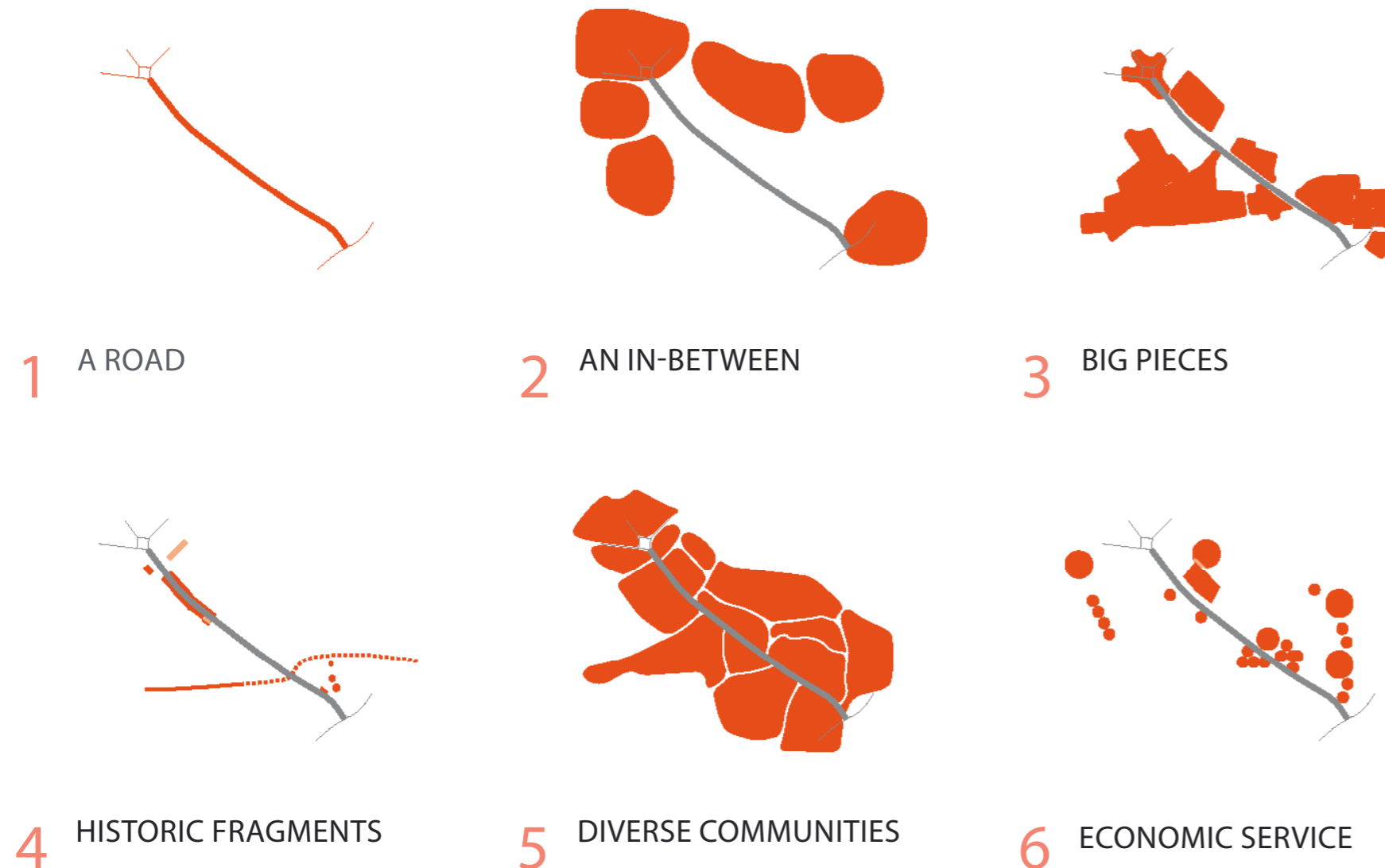
The area has been through two seismic shifts to its overall form and identity. First, the unprecedented growth and industrialisation in the nineteenth century, then wartime bombardment, slum clearance and redevelopment in the latter half of the twentieth century. This in turn was followed by the decline of industry and manufacturing and its replacement with retail and service industries.

1896

By the end of the 19th Century development had been consolidated across the area, with schools and workers housing carved out of spare space. Industry was concentrated near the railway line and the Surrey Canal. The Livesey gasworks extended eastwards.

Old Kent Road today

Today, Burgess Park forms the only sizeable open space in the area. The Old Kent Road is now home to a range of uses including extensive industrial parks and out of town shopping. Most recently there has been a move towards more intimate housing developments, fine grained and more responsive to their surroundings.



Old Kent Road 1905



Old Kent Road, 2015

Chapter contents

- Existing corridor functions
- Walking
- Cycling
- Public transport
- General traffic
- Powered two wheelers
- Freight movement
- Urban fabric assessment
- Stakeholder mapping of key challenges

2

Old Kent Road Corridor Today

The Old Kent Road corridor, as considered in this study, lies primarily within LB Southwark, with a short section of its southern end lying within LB Lewisham. It forms part of the A2 corridor, a major radial corridor into central London from south east London. It is approximately 3.3 km long and links the Inner Ring Road at the northern end with Queen’s Road / New Cross Road at its southern end. The following sections present the current function of the corridor, the challenges and opportunities for each mode as well as physical constraints along the corridor that need to be considered in future design work.

Existing corridor functions

The Old Kent Road corridor is a ‘red route’, forming part of the Transport for London Road Network (TLRN). This reflects its importance as a movement corridor, for various modes of surface transport. Its place function is limited to shop frontages and green spaces sporadically abutting certain sections of the corridor.



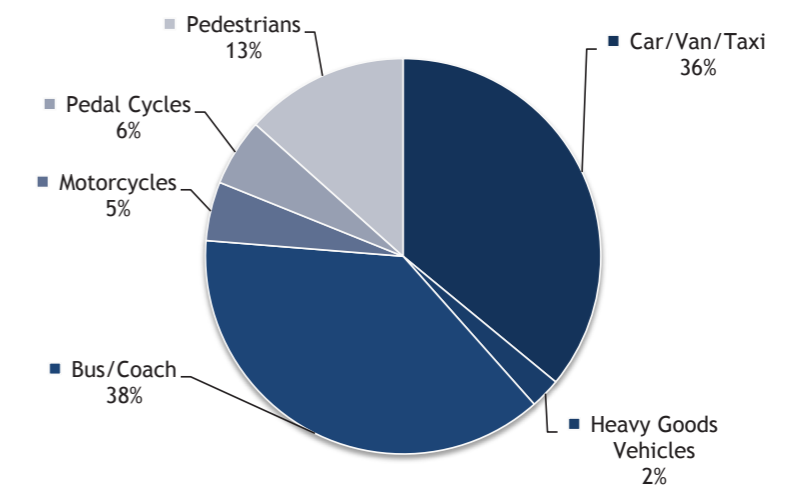
Source: Roads Task Force, *The vision and direction for London’s streets and roads*

The general dominance of the movement function is reflected in its current designation as a ‘Core Road’ within the Street Types for London matrix. This street type has a high movement function, but only a low place function.

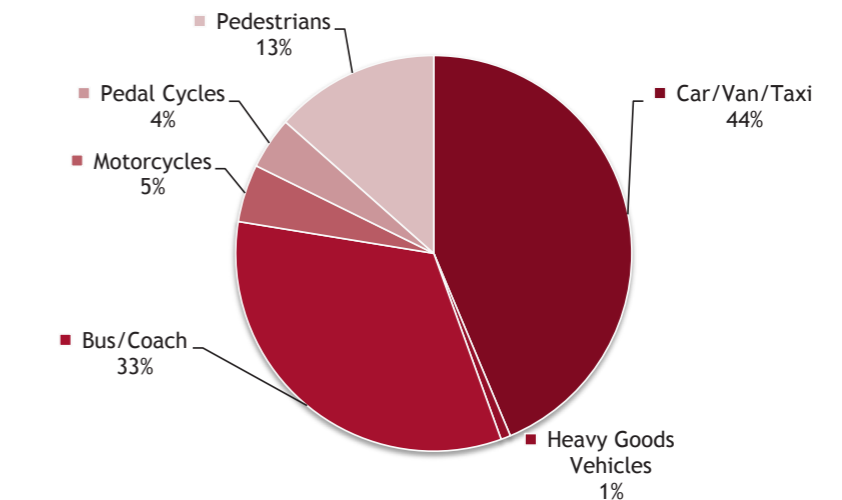
In order to understand existing movement patterns on the corridor, various data sources have been drawn upon, including multi-modal surveys that were undertaken in November 2015.

Based on this, average mode shares along the length of the corridor are shown in the graphs to the right. It can be seen that the largest proportions of movements are currently by car/van/taxi and bus/coach, with a higher bus/coach mode share in the AM peak.

Average AM peak hour corridor mode split (people/passengers)



Average PM peak hour corridor mode split (people/passengers)



Source: Based on Traffic Surveys (November 2015), TfL Surveys (2014/2015), and Occupancy rates from the Travel in London report 5 and BODS.

Walking

Walking Flows

Overall pedestrian activity varies considerably along the corridor with more pronounced peaks towards the Bricklayers Arms junction. The surveys undertaken in November 2015 showed that the busiest areas are located around the Dunton Road - Albany Road junctions with sudden spikes of activity around Trafalgar Avenue and Peckham Park Road.

Generally, the northern footways are quieter than the southern ones. This could be explained by the presence of more retail frontages and local facilities along the southern footway, as well as the presence of bus passengers in the morning catching inbound buses.

Generally speaking, footway width along the northern side of the corridor is greater than on the southern side creating a mismatch between the space available for pedestrians and current demand.

Level of Service (LoS)

- > Generally the level of service is good especially along the northern footways.
- > There are obvious capacity issues at bus stops especially during the morning and evening peak hours due to high numbers of passengers waiting or interchanging at bus stops, particularly at bus stops in the vicinity of Tesco and Bricklayer's Arms.
- > Although crowding at bus stops is sporadic, their locations should be re-considered to allow for queuing and waiting and minimum clear footway widths for moving pedestrian flows.



Passengers queuing at bus stop

Crossing Provision

In total, there are 22 signalised pedestrian crossings provided along Old Kent Road within the study area.

The uneven distribution of these points along the length of the corridor creates gaps in pedestrian connectivity. Out of these crossings, 15 are staggered, leading to higher waiting times and less direct crossing routes for pedestrians.

Some of the offsets between the two halves of a staggered crossing are quite large, with the largest being a 30m offset near the junction with St James's Road. This inhibits the ease of movement between opposite sides of the road.

In addition to these signalised crossings, there is one pedestrian subway underneath Old Kent Road, near Mandela Way. This subway has both stairs and ramps accessing it.

At most signalised junctions, the pedestrian crossings across side streets are controlled. However, the crossings are uncontrolled across the following four side streets, as pedestrians must either cross during the intergreen or between gaps in turning traffic:

- > East Street
- > Hendre Road
- > Trafalgar Avenue
- > Pomeroy Street



Pedestrian crossing informally in the vicinity of the junction with Surrey Square

Barriers to Movement

Informal crossing across Old Kent Road is also possible along most of its length (notwithstanding that there may not be gaps in traffic), however it is difficult in some sections due to the presence of physical barriers.

The locations where this is the case are:

- > Near Bricklayers' Arms, due to the presence of the flyover ramp (210m)
- > Two sections of pedestrian guardrail in the centre of the road, in front of Tesco and Burgess Park (170m)
- > Between Oakley Place and Trafalgar Avenue the southern footway is significantly higher than the carriageway, creating a large level difference (80m)
- > Between Olmar Street and Hyndman Street there are intermittent obstructions, due to raised planters and pedestrian guardrail (230m)

There is also a short section of pedestrian guardrail between Ilderton Road and the railway bridge (50m).

In total, these physical obstructions prevent crossing along approximately 740m of the corridor, which equates to just over 20% of its length.

The longest continuous obstruction is due to the Bricklayers' Arms flyover, which is about 210m in length.

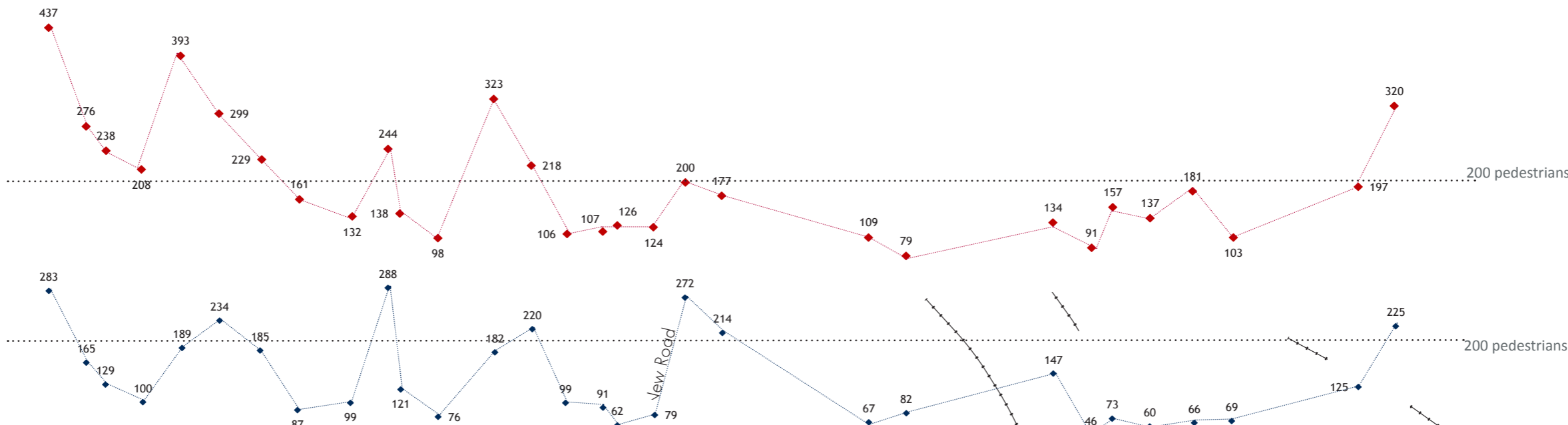


Pedestrian crossing informally in the vicinity of the junction with Rotherhithe New Road

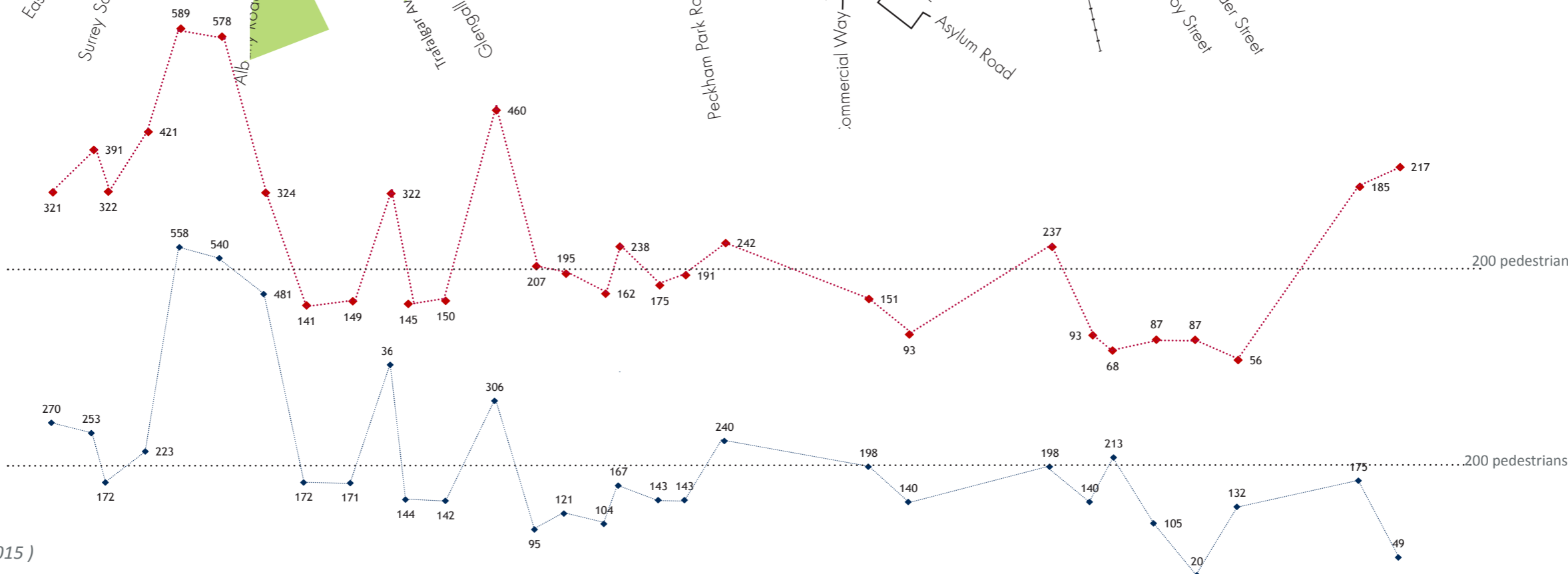
Weekday morning and evening peak hour pedestrian movement

AM Flows
PM Flows

Bi-directional pedestrian flows along the northern footway

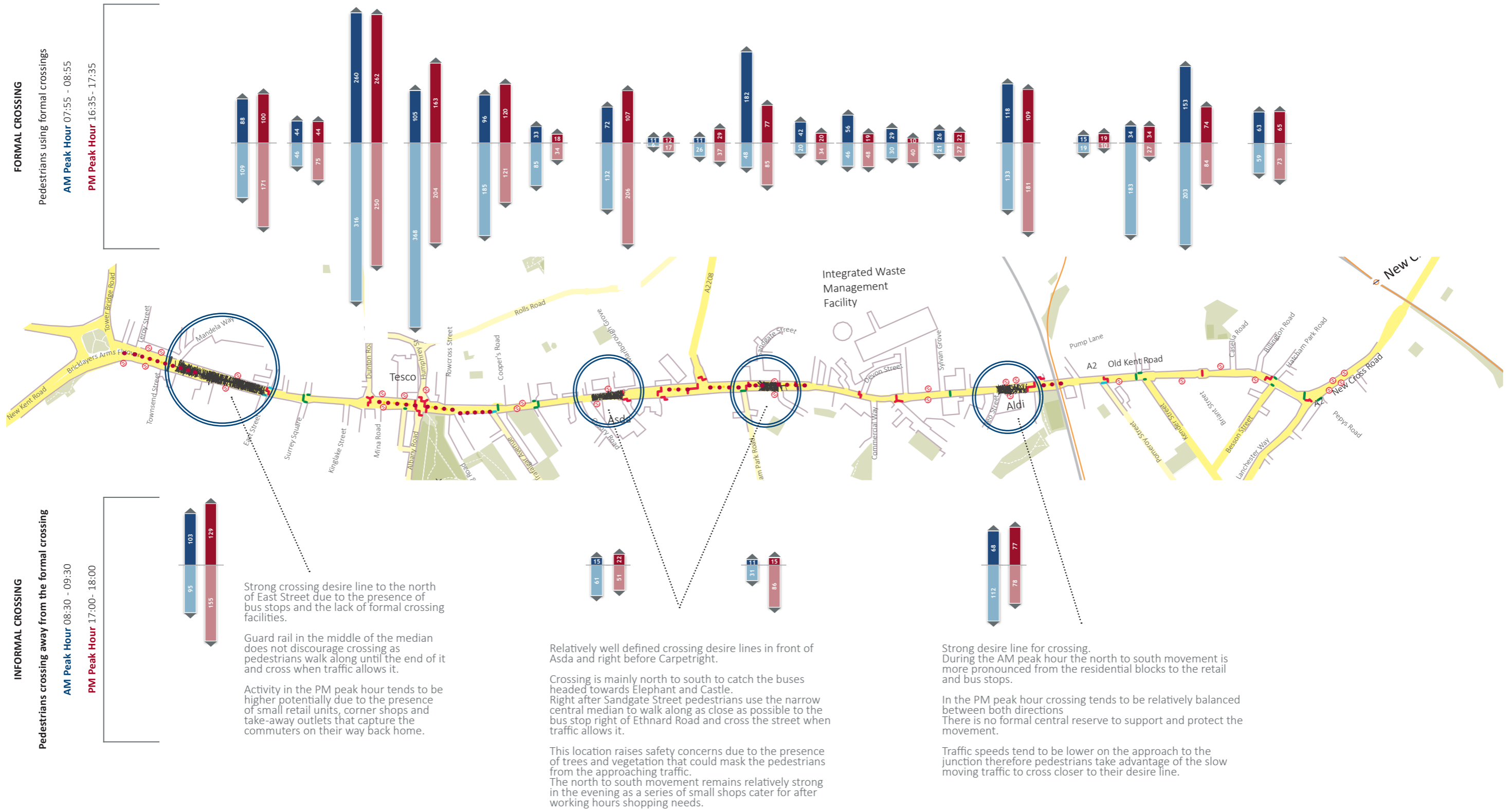


Bi-directional pedestrian flows along the southern footway



Source: Traffic Surveys (November 2015)

Weekday pedestrian crossing movements across Old Kent Road



Source: Traffic Surveys (November 2015)

Note: Background map shows the informal pedestrian desire lines captured during the weekday morning, inter-peak and evening peak periods, totalling 6.5 hours.

Key:
 Locations of informal crossing
 Barriers to pedestrian movement

Informal Crossing Activity

In spite of the existing barriers to pedestrian movement there are several areas where informal crossing is very common both in the AM and PM peak periods.

- > There are strong desire lines north of East Street with the median providing opportunities for almost one crossing every 22 seconds in the AM peak hour and one crossing every 16 seconds during the PM peak hour.
- > In the area between Ossory Road and Ethnard Road informal crossing is common especially in front of Asda and towards the westbound bus stop located before the junction of Old Kent Road and Ethnard Road.
- > Further south along the corridor, the area in front of Aldi also experiences high levels of informal crossing throughout the day with one person crossing every 26 and 29 seconds respectively in the AM and PM peak hours.

Quality of the Walking Environment

Footways along the corridor are often encroached upon by street clutter including large refuse bins, advertising and signage.

The quality of pavement, finishing and drainage are not consistent along the corridor.

Rain can accumulate in front of some of the staggered crossings forcing pedestrians to deviate, jump or cross away from the signalised junction altogether. On the other hand, there are some sections of very wide and uncluttered footways (such as between Trafalgar Avenue and Glengall Road, Ossory Road to Olmar Street), however these tend to be at locations where there is relatively low demand for pedestrian movement.

In terms of wayfinding and orientation there is no formal provision.

The most obvious landmarks and reference points for pedestrians are the retail park, superstores along the corridor as well as Burgess Park.

Collisions

The lack of formal crossing facilities together with the wide carriageway width and low priority at junctions are likely to increase the risks pedestrians take along the corridor.

The 2013 TfL Study A2 Old Kent Road – Road Space Reallocation Study highlighted that approximately 17% of the collisions on Old Kent Road involve a pedestrian and that at 47% of the locations analysed the proportion of collisions involving pedestrians was above the average recorded across the entire TLRN.



Evidence of poor maintenance of drainage affecting crossing facility



Reduced clear footway width

KEY CHALLENGES

- > Lack of sufficient clear width at key locations
- > Relatively poor provision for pedestrian crossing both formal and informal
- > Poor provision of pedestrian central refuges
- > Frequent barriers to pedestrian movement
- > Strong informal pedestrian desire lines not catered for

DESIGN CONSIDERATIONS

Footways

- > Provide sufficient footway width particularly around bus stops
- > Provide, where footway width allows it, opportunities for pedestrians to stop, rest and use the public space
- > Increase the quality and maintenance of footways and crossings

Crossings

- > Support pedestrian desire lines by providing pedestrian crossings
- > Increase safety by providing accessible refuges along the desire lines
- > Rationalise pedestrian barriers
- > Create additional crossings where required
- > Lower traffic speeds where feasible
- > Review pedestrian green times and, where feasible, allow more time for crossing
- > Explore the possibility for diagonal crossing, especially at wider junctions

Cycling

According to the Southwark cycling strategy, 7.1% of people living in Southwark cycled to work in 2011.

The surveys undertaken for this study showed that cycling represents approximately 6% of the Old Kent Road users in the AM peak hour. Although this is only the fourth highest mode share, the absolute number of cyclists is significant, considering there is negligible provision for cyclists at present and the corridor is a strategic route with a maximum speed of 30 mph.

Cycling flows

The survey results also showed that the Old Kent Road is used as a thoroughfare for most cycle trips rather than a destination.

Cycle flows are extremely tidal, with a heavy westbound flow in the AM peak and eastbound flow in the PM peak, with much smaller flows in the opposite direction. This suggests that the corridor caters mainly for commuting cycling trips in the morning and evening peaks with the main desire lines along the length of the corridor.

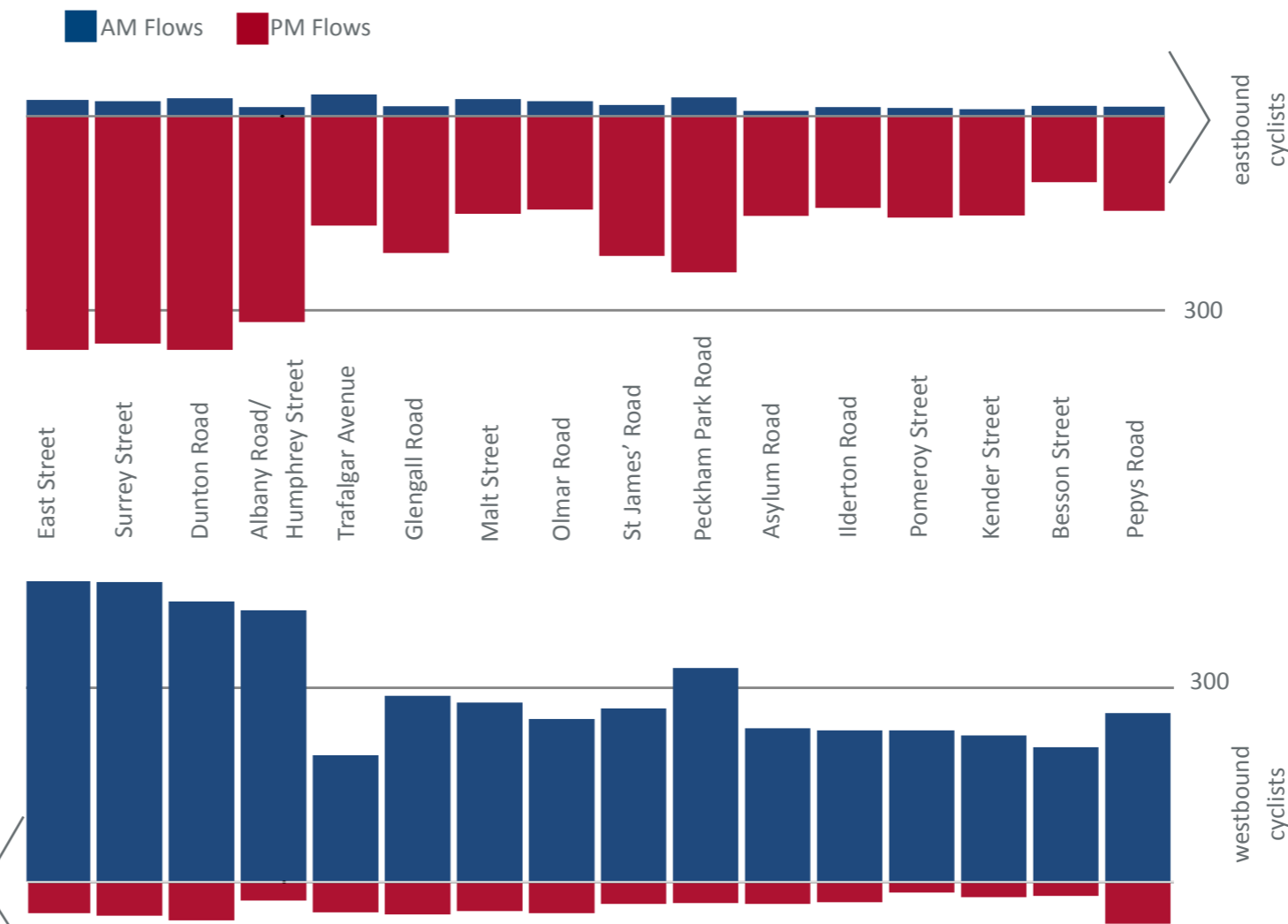
The spikes in flows at certain junctions such as Peckham Park Road, Albany Road, Malt Street and Glengall Road highlight the importance of these junctions for cyclists either joining the corridor or crossing it.

These locations are crucial for maintaining connectivity with the wider cycle network and increasing cycle safety.

A diagram of the AM peak hour flows on the next page shows a detailed snapshot of movements at each junction and the flows joining the network particularly from the south.

For comparison purposes, these peak hour cycle flows at the western end of Old Kent Road are only slightly lower than those observed in 2013 along Whitechapel Road, which is a Cycle Superhighway (although these counts took place before the recent upgrade).

Cycle flows along Old Kent Road



- > Cycle flows are highly tidal with relatively low flows in the counter peak direction;
- > Cycle flows are generally highest at the western end of the corridor

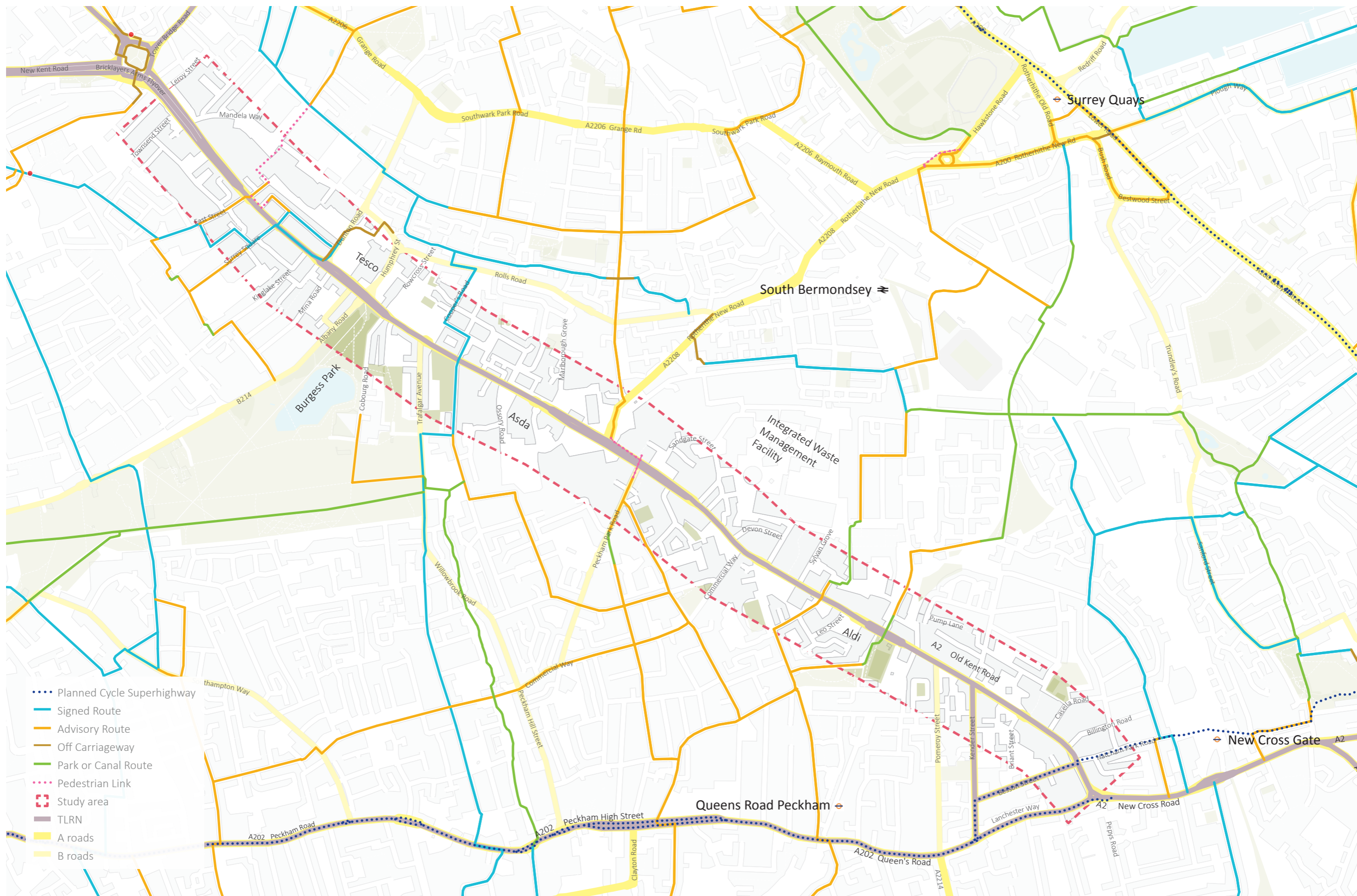
Source: Based on Traffic Surveys (November 2015), TfL Surveys (2014/2015)



Westbound tidal cycle flows in the morning peak hour



Absence of cycle lanes forces cyclists into the same space as general traffic



- Planned Cycle Superhighway
- Signed Route
- Advisory Route
- Off Carriageway
- Park or Canal Route
- Pedestrian Link
- ▭ Study area
- ▬ TLRN
- ▬ A roads
- ▬ B roads

Cycling Network



Cyclists of various abilities occupy different parts of the road space

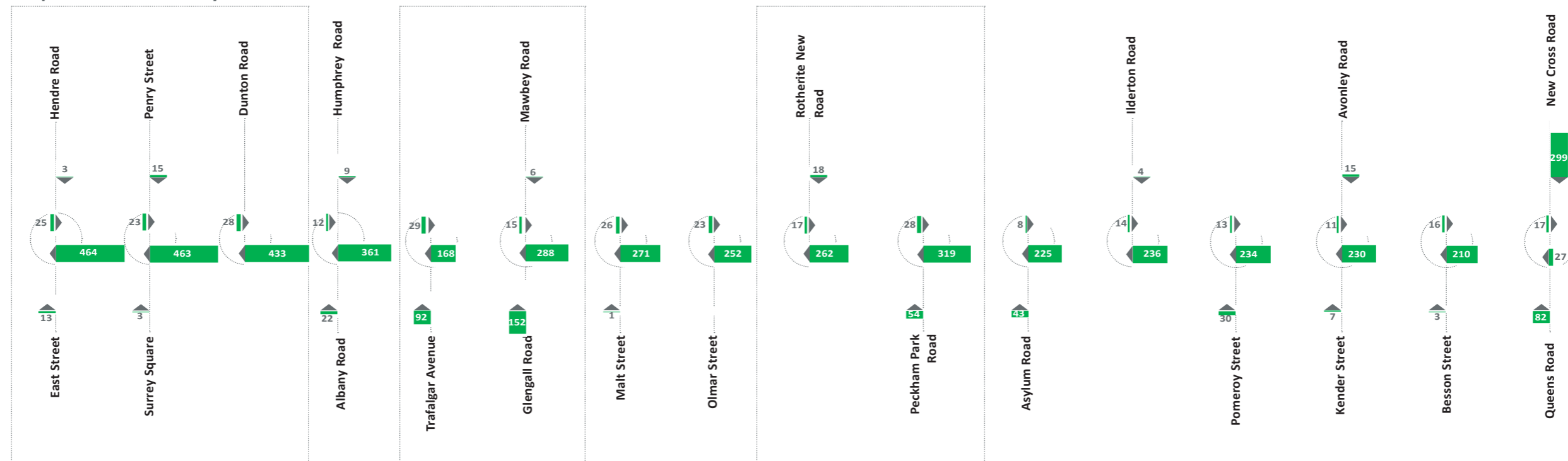


Cyclists of various abilities occupy different parts of the road space



Lighting during dark hours should be considered to improve general visibility and decrease the risk of collisions

AM peak hour corridor cycle flows



In the AM peak hour, westbound cycle movements are the predominant flow. At the eastern end of the corridor, this flow is about 200 cycles, and gradually increases until it almost reaches 500 cycles just before Bricklayers Arms. This is a very significant flow, and is comparable to popular corridors in The City of London.

Trafalgar Avenue and Glengall Road have high flows of cyclists from the south. The majority of cyclists do not seem to be joining the corridor and head instead towards the north on Mawbey Road and Cooper's Street following the LCN cycle route towards the north.

Peckham Park Road provides another important link to the south but not as strong as Glengall Road and Trafalgar Avenue.

Source: Based on Traffic Surveys (November 2015), TfL Surveys (2014/2015)

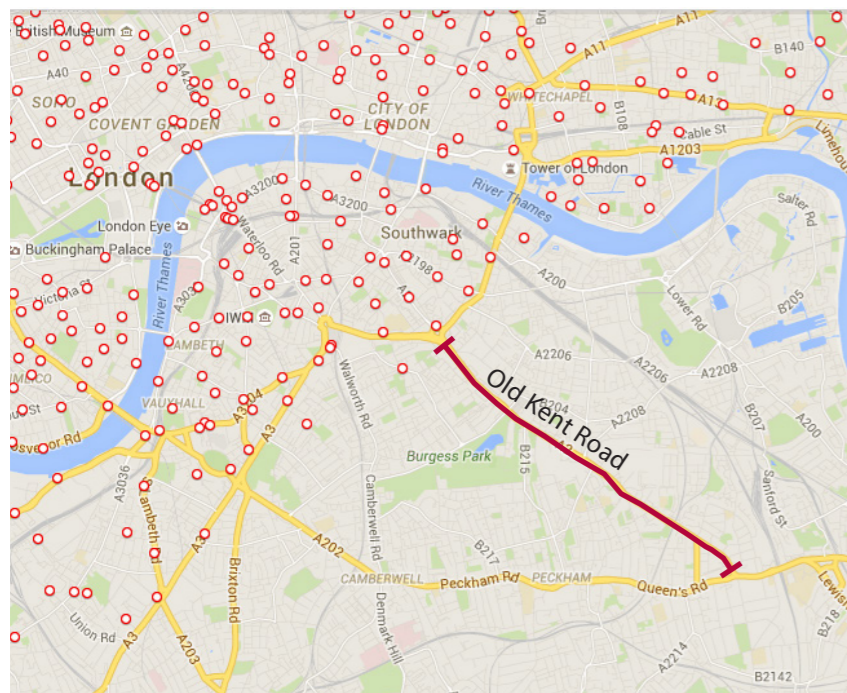
Cycle Hire Network

Currently the Santander Cycle Hire network ends at Bricklayers Arms, and does not provide coverage of Old Kent Road.

The Southwark Cycling Strategy has identified the expansion of the Santander Cycle Hire scheme as a priority to increase cycling mode share and encourage cycling amongst those that do not have access to a cycle or do not have space to store one.

LB Southwark's aspiration is to expand the scheme south to Walworth, Bermondsey, Rotherhithe, Camberwell and Peckham.

If these efforts succeed then levels of cycling are likely to increase along the corridor and the junctions joining into Old Kent Road from the south are likely to increase in importance.



Source: TfL Maps, Santander Cycles (2016)

Quality of the Cycling Infrastructure

Along Old Kent Road, there are currently minimal facilities for cyclists. There are discontinuous bus lanes which cyclists can use, but they are still subject to conflicts with buses and powered two wheelers. There are also some advance stop lines (ASLs) provided at some junctions.

Current on-street cycle parking provision is limited to locations such as the vicinity of schools, local services such as GP surgeries, as well as some cycle parking stands at the entrances to retail superstores such as Tesco, Lidl and Asda. The Southwark Cycling Strategy (2015) recognises that there is generally low

cycle parking provision across the borough and investment in 3-400 additional hangers are required to support the increase in mode share that is being targeted.

Quietway 1 provides a 9km long signposted cycle route between Waterloo and Greenwich, along traffic-free paths and quieter back streets.

It is London's first Quietway route, and was opened in June 2016. It roughly parallels the Old Kent Road corridor, running to the north of it. At its western end, it connects to Cycle Superhighway 6 at Blackfriars Road, and Cycle Superhighway 7 at Southwark Bridge Road. As it has only been opened very recently, it is not yet known whether it will attract cyclists who would otherwise use Old Kent Road (which remains the most direct cycle route in the area towards central London).

Collisions

The lack of formal cycle facilities means that cyclists are largely unprotected from conflict with motorised vehicles, and this may be a contributory factor to many of the cycle collisions that have occurred along the corridor.

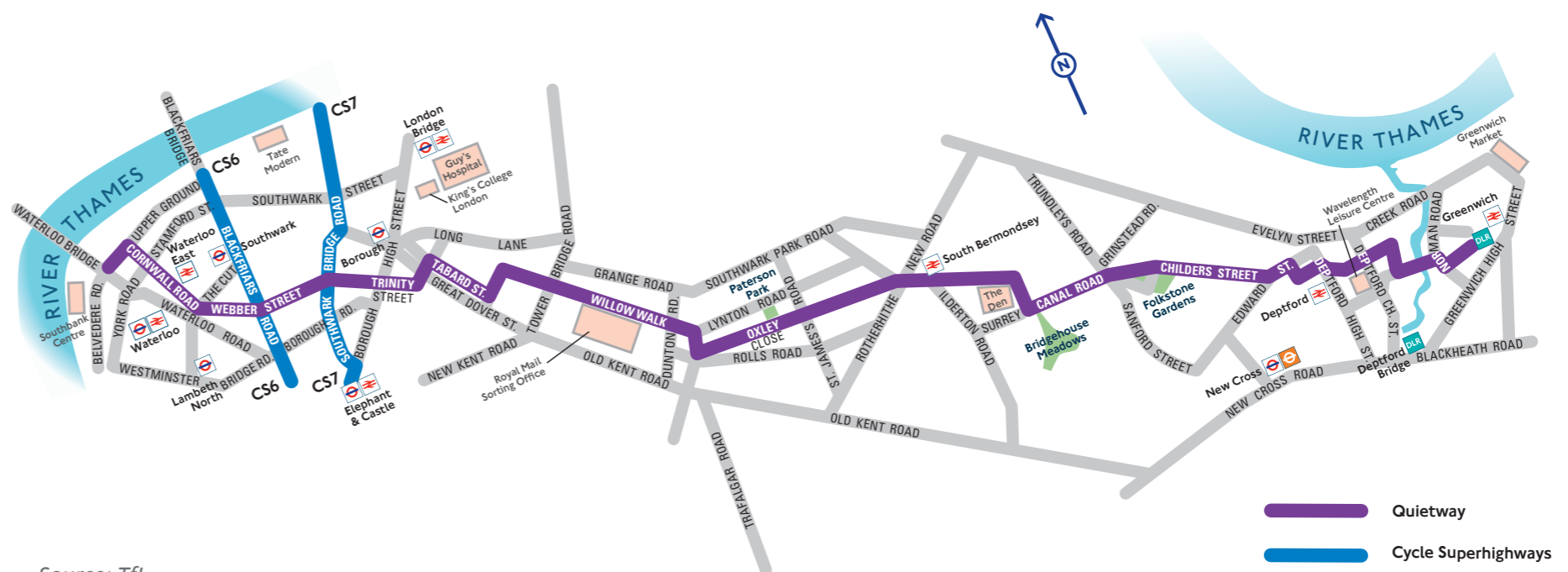
The 2013 TfL Study A2 Old Kent Road – Road Space Reallocation Study highlighted that approximately 20% of the collisions on Old Kent Road involve a cyclist and that, on average, at 42% of the locations analysed the proportion of collisions involving cyclists is above the average across the whole TLRN (17%, as reported in the Collisions and casualties on London's roads: Annual report 2013).

KEY CHALLENGES

- > Very limited cycle facilities with no designated cycle routes
- > Inconsistent provision of advance stop lines (ASLs)
- > Little provision for cycle parking
- > Pronounced tidal flows in the AM and PM peak hour due to commuting
- > Relatively high levels of collisions involving cyclists (20% of total)

DESIGN CONSIDERATIONS

- > Review the provision of cycling infrastructure and cycle parking
- > Increase permeability and make it safe for cyclists to get across the corridor
- > Explore design and/or technological solutions to increase the level of cycle safety
- > Explore the possibility of extending the Santander Cycle Hire network
- > Explore the possibility of linking into the Cycle Superhighways network



Source: TfL

Public transport

Overview

The accessibility of the Old Kent Road corridor varies along its length. PTAL values provide an indication of the how good public transport access is for an area, with 0 representing the worst access and 6b representing the best. In the study area, the worst PTAL values of 3 and 4 are found in the middle, given that this section is reliant on bus services only. Towards either end of the study area, the PTAL value increases to 5 and 6a, as the ends are closer to rail stations, as well as more bus services.



Source: TfL

Bus network

Given the relative lack of rail - based public transport services, buses play a vital role in transporting people along and around the corridor. It is an important bus corridor served by 12 routes. Most of these routes tend to be radial in nature, catering for movements to and from central London. Out of these, four routes serve the entire length of the corridor:

- > 21: Lewisham to Newington Green
- > 53: Plumstead to Whitehall
- > 172: Brockley Rise to St Paul's
- > 453: Deptford to Marylebone

Together, these buses provide a frequency of 36 buses per hour.

Bus priority is provided intermittently on Old Kent Road via unconnected stretches of bus lanes. Furthermore, many sections of bus lanes operate during peak periods only, meaning that outside these times buses can be delayed by general traffic congestion.

The recent removal of the Elephant and Castle roundabout has noticeably reduced bus journey time reliability on the Old Kent Road corridor. In order to mitigate this, action such as using more vehicles or route curtailments have become necessary. As such, consultation with TfL Buses indicates that measures to improve reliability are a key priority.

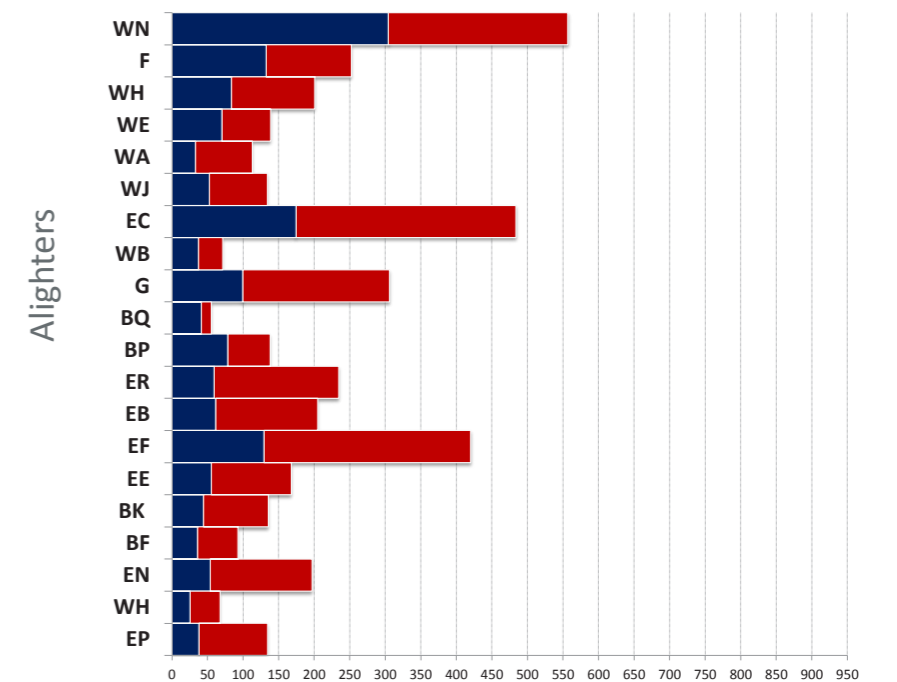
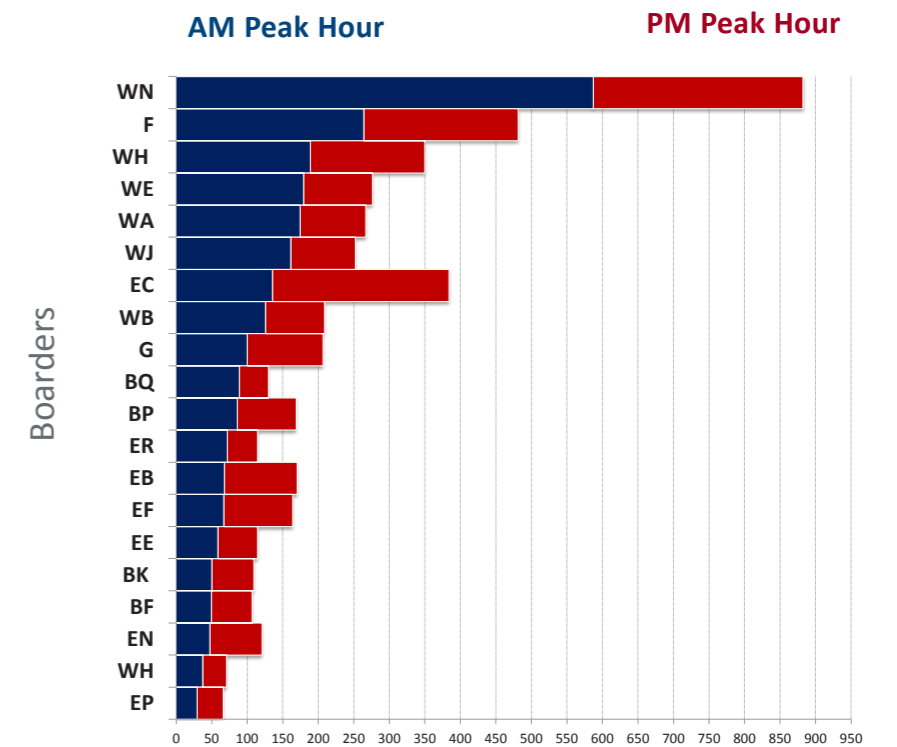
Bus usage

Work previously completed by TfL has shown that buses are busiest during the AM peak in the inbound direction at Bricklayers' Arms. At this point, bus occupancy surveys undertaken by TfL over the busiest hour show that an average of 76.5 passengers per bus departed the survey location. During this hour, 35 out of 47 buses departed with 80 or more passengers on board and a total of 160 passengers were unable to board the first bus they wished to. These figures are higher than the usual planning capacity of 70 passengers per bus and show there is a need for increased bus capacity in the AM peak.

Demand is spread reasonably evenly across all routes which run from Old Kent Road to Elephant and Castle. Beyond Elephant and Castle, there is sufficient capacity to meet demand on all routes from Old Kent Road / Bricklayers' Arms suggesting that a significant number of passengers are travelling to Elephant and Castle, where the majority of passengers alight to interchange with the underground or other bus routes.

BODS data suggests that the busiest stops are WN (Tesco) and F (East Street) in the direction of Elephant and Castle and EC (Tesco) and EF (Malt Street) in the direction of Lewisham.

A particular characteristic of the corridor is that the total patronage remains relatively unchanged between the AM and PM peaks and at 8 out of 20 stops along the corridor, the PM boarders are higher than the AM boarders.



Source: TfL BODS

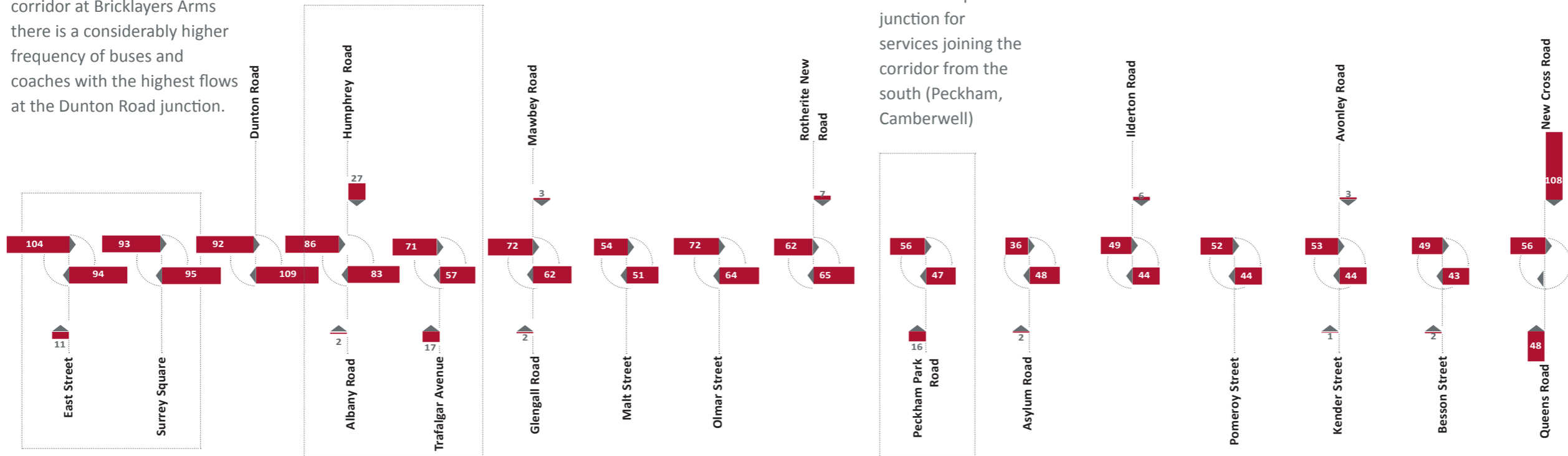


- █ Bus lane
- Bus route
- ⊕ Bus stop
- - - Study area
- █ A roads
- █ B roads

Public Transport Network

AM peak hour corridor bus and coach flows

Towards the end of the corridor at Bricklayers Arms there is a considerably higher frequency of buses and coaches with the highest flows at the Dunton Road junction.



The flows at the western end of the corridor are significantly higher than for comparable corridors. For example along Whitechapel Road there are peak bus/coach flows of about 40-50 vehicles per hour (observed in 2013).

Humphrey Road and Trafalgar Avenue add traffic from the south and north. Buses from the north can also be terminating services re-joining the network.

Source: Based on Traffic Surveys (November 2015), TfL Surveys (2014/2015)



Passengers not able to board the number 21 bus in April 2016 morning peak



High occupancy of bus near the junction with Dunton Road



Street clutter limiting boarding and alighting

Coaches

Old Kent Road carries a significant proportion of coaches entering and leaving London, however it should also be noted that they transport a low proportion of people moving along the corridor. Coach survey data (as shown in the table below) indicates that there are generally over 200 coaches using Old Kent Road on an average weekday, and that these make up approximately 7% of all of the coach movements into and out of central London.

	Easter 2011	Spring 2011	Summer 2011	Autumn 2011	Average 2011
Old Kent Road	250	264	204	176	224
Total (all corridors)	3,346	3,181	3,253	2,639	3,105
Old Kent Road (%)	7.5%	8.3%	6.3%	6.7%	7.2%

Source: TfL, 2011 data

Traffic surveys conducted in November show that the number of westbound and eastbound coaches on Old Kent Road is largely consistent across the junctions surveyed, which suggests that most coaches travel along the entire length of the corridor. During the weekday AM peak hour, there are almost 50 coaches using the corridor, with most of these travelling eastbound. There are fewer coaches in total during the weekday PM peak hour (26), and again there are most eastbound than westbound coaches. During the AM peak hour, coaches make up about 5% of traffic on Old Kent Road (measured in pcu), and about 2% in the PM peak hour.



Coaches in the morning peak

Direction	Weekday AM peak hour (07:15-08:15)	Weekday PM peak hour (17:30-18:30)
Eastbound	31	15
Westbound	17	11
TOTAL	48	26

Source: Based on Traffic Surveys (November 2015), TfL Surveys (2014/2015)

Information supplied by TfL indicates that coaches departing from Victoria Coach Station and travelling along Old Kent Road serve a mixture of destinations in continental Europe and Kent. The most common destinations for international coaches are Paris and Amsterdam, with the remainder serving various European cities further afield.



Coaches in the morning peak

Rail

Public transport access along the corridor is primarily by bus. The nearest rail stations are generally located some distance from the corridor, and these are summarised in the table below.

Station	Distance to the corridor	Served By	Annual Entries + exits	Zone(s)
Elephant and Castle	1.1 km	Bakerloo line, Northern line, National Rail	2.9 m	1/2
New Cross Gate	400 m	London Overground, National Rail	4.3 m	2
Queens Road Peckham	750 m	London Overground, National Rail	1.6 m	2
South Bermondsey	1.0 km	National Rail	0.8 m	2

Source: Estimates on station usage (ORR, 2014) and Multi year station entry-exit figures (TfL, 2014)

KEY CHALLENGES

- > Important bus corridor with high levels of patronage throughout the day
- > Limited bus priority provided
- > Insufficient provision for waiting and queuing passengers
- > Important corridor for coaches including international routes

DESIGN CONSIDERATIONS

- > Intensification of bus priority
- > Improve continuity of bus lanes
- > Investigate the benefits of providing bus priority at signals
- > Place bus stops where footway width allows sufficient space for queuing and waiting
- > Align bus stops with crossings and pedestrian refuge facilities to reduce safety risks

General traffic

Within the study area, Old Kent Road forms part of the Transport for London Road Network (TLRN) and is part of the A2.

Old Kent Road is a key strategic link, only connecting central London and its south-eastern suburbs, but also towards destinations further afield in Kent.

The nearest other alternative radial routes are some distance away, which means that there are few practical alternative routes for radial traffic on Old Kent Road. For example, the adjacent TLRN radial corridors are the A102 (towards the Blackwall Tunnel) and the A23 / A3. However, these routes provide links between origins and/or destinations that are different from those served by the A2 corridor.

At Bricklayers Arms, Old Kent Road intersects with the Inner Ring Road (IRR) around central London, which is also part of the TLRN and forms the boundary of the Congestion Charging Zone (CCZ). The other arm at the roundabout is the continuation of the A2 along Great Dover Street (also part of the TLRN), which connects to Borough and onwards into central London.

At the other end of the study area, it intersects with Queen’s Road, which is part of the A202 route and also part of the TLRN. The A2 itself continues east, connecting to the M25 motorway, and ultimately linking with the M2 motorway in Kent. At New Cross, the A2 also links to the A20, which links with the M20 motorway providing connections to strategic destinations including the Channel Tunnel and various cross-Channel ports.

However, between the junctions at either end of the study area, Old Kent Road does not intersect with any other TLRN roads, or even Strategic Route Network (SRN) roads.

Within the study area, there are 21 sets of traffic signals along Old Kent Road (including the signals at either end). This comprises 17 signalised junctions and four signalised crossings.

Road environment for traffic

The environment for traffic along Old Kent Road is not consistent along its length mainly because the width of the carriageway varies significantly, with some sections being dual carriageway, and others being only a single carriageway. This inconsistent environment is also caused by parking and loading bay provision, intermittent bus lanes, flares at junctions and central reservations which vary in width.

The changing number of lanes can cause confusion for drivers and is a safety issue. The most common number of lanes in one direction is two, although in some cases the nearside lane is designated as a bus lane.

However, there are also significant sections that have three lanes in one direction, with some short sections with four lanes in one direction (in each case the nearside lane is designated as a bus lane). There is also a very short section with only a single lane in one direction.

Whilst double red lines apply to some sections of Old Kent Road (meaning that stopping is not generally allowed), there are significant sections which are controlled by single red lines, which means that stopping is allowed outside of the hours of Monday–Saturday from 7am to 7pm, which effectively reduces the number of lanes available for moving traffic..

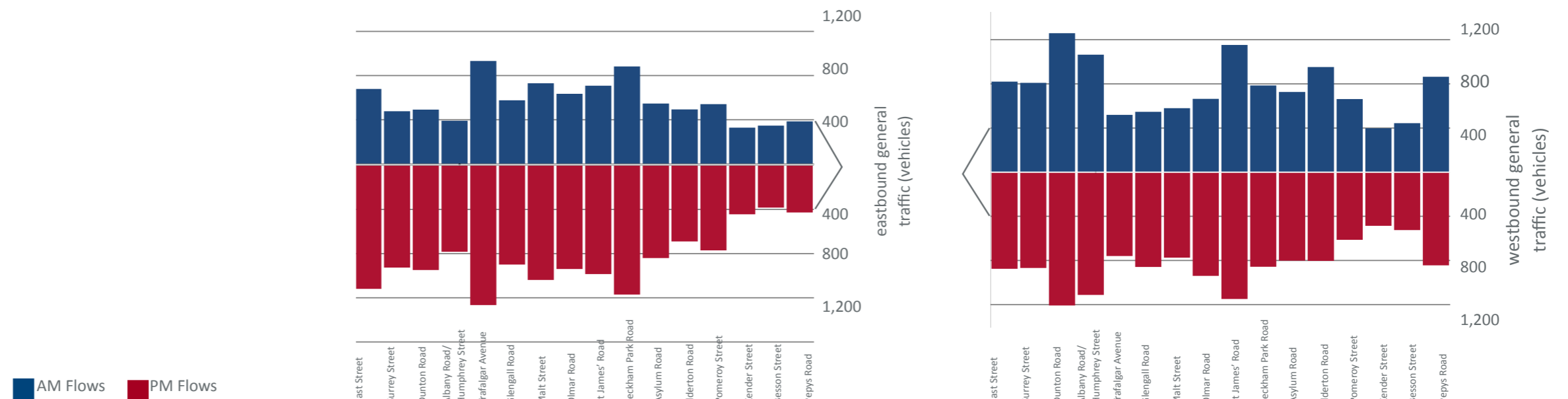
Further, there are also many parking and/or loading bays, which are in use between 10am and 4pm on Monday–Saturday. This means that the maximum number of lanes on Old Kent Road is only available between 7am and 10am, and between 4pm and 7pm, Monday–Saturday.

Traffic flows

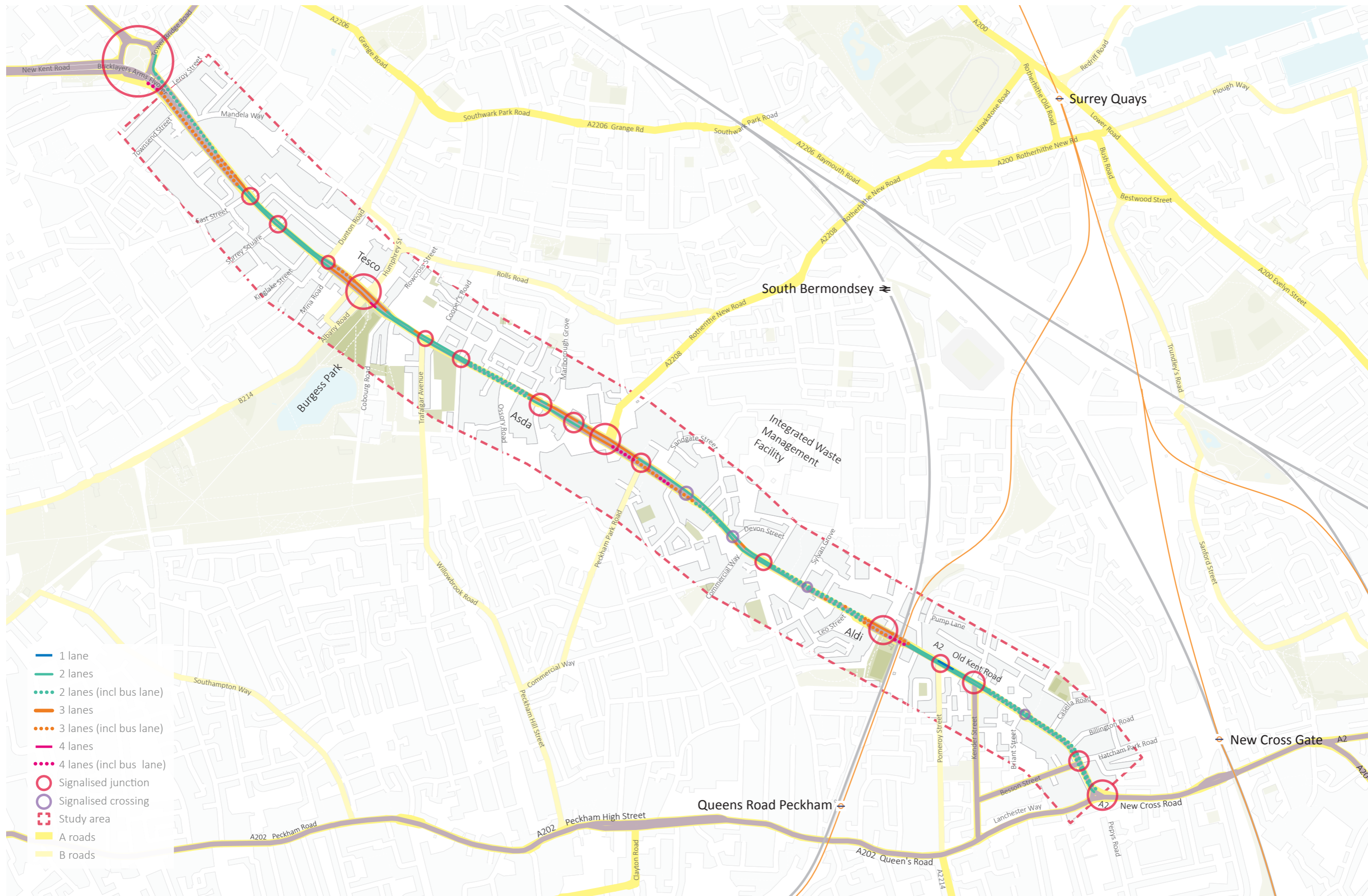
There are two permanent TfL traffic counters along Old Kent Road. The flows recorded at these counters show that the westbound direction is generally busier in the morning peak whilst the evening has more pronounced flows in the eastbound direction.

The surveys undertaken for this study show that general traffic (cars, vans and taxis) represents 36% of total users of the road in the AM peak hour and 44% in the PM peak hour.

For comparison purposes, peak hour flows for these vehicle types on Whitechapel Road are generally between about 500-700 vehicles per hour (as observed in 2013).



Source: Based on Traffic Surveys (November 2015), TfL Surveys (2014/2015)



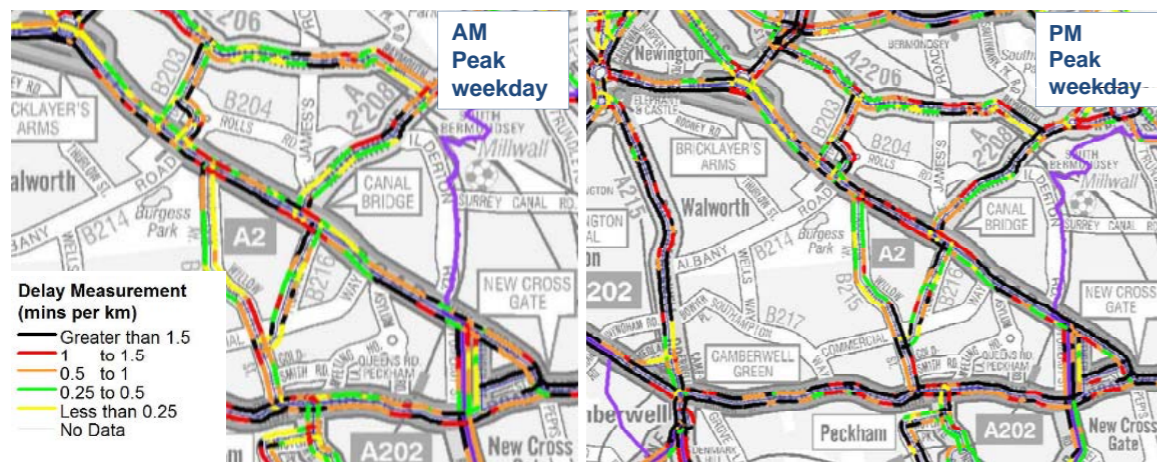
- 1 lane
- 2 lanes
- 2 lanes (incl bus lane)
- 3 lanes
- 3 lanes (incl bus lane)
- 4 lanes
- 4 lanes (incl bus lane)
- Signalised junction
- Signalised crossing
- Study area
- A roads
- B roads

General Traffic Network

Operation

There are currently delays along the Old Kent Road corridor, including in the peaks. High delays of greater than 1.5 minutes per km have been recorded in the westbound direction during the AM peak, and in the eastbound direction during the PM peak.

In the AM peak the highest delays are intermittent and may be due to queuing at specific junctions along the corridor. In the PM peak traffic congestion is caused by queuing along the A2 corridor from New Cross.



Source: TfL

Based on Google data, we have analysed observed average speeds along the corridor across a typical week. In the westbound direction, average speeds are the lowest during the weekday AM peaks, as well as during the day on Saturday and Sunday. In the eastbound direction, average speeds are the lowest in the weekday PM peaks, and also during the day on Saturday and Sunday.



Source: Google

KEY CHALLENGES

- > Inconsistent road environment creates bottlenecks and confusion for drivers
- > High levels of delay
- > Few practical alternative radial routes

DESIGN CONSIDERATIONS

- > Provide a more consistent number of lanes along the corridor
- > Examine options for reducing vehicle delays where possible
- > Explore options for relocating existing on-street parking and loading

Powered two wheelers

Powered two wheeler flows

In addition to cars, vans and taxis, there are significant flows of motorcyclists along Old Kent Road.

The flows appear to mainly consist of commuter movements.

This is demonstrated by the tidal flows in the morning and evening peaks.

At the northern end of the corridor there is a higher concentration of food and beverage outlets that are likely to use also motorcycle deliveries in the local area therefore there will also be an element of local motorcycle movement.

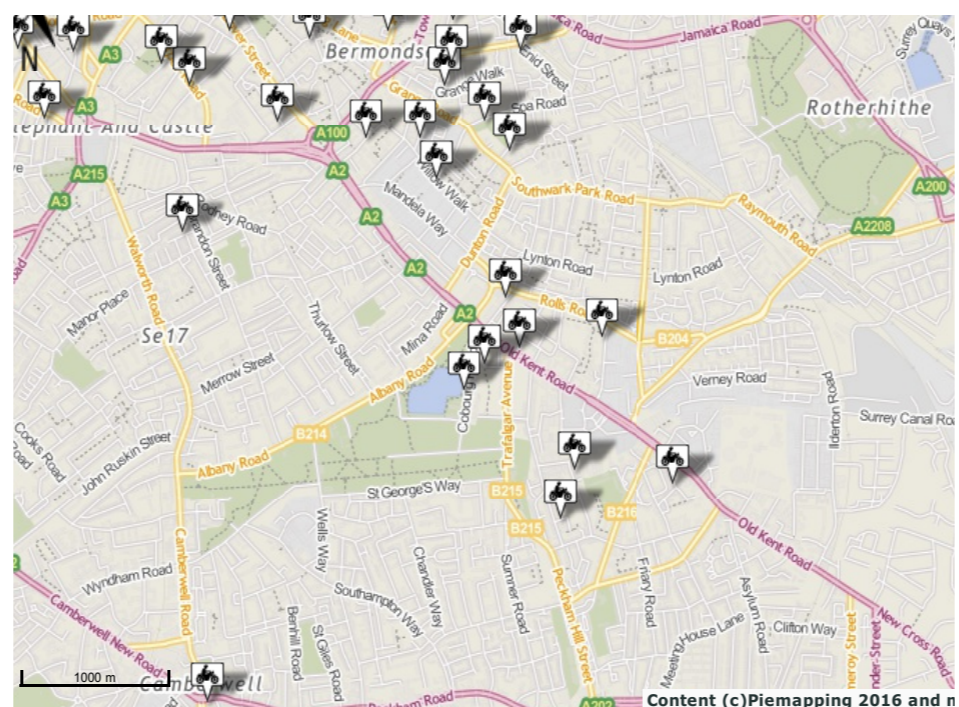
Rotherhithe New Road and Peckham Park Road are key junctions during the morning peak flows.

In the AM peak, westbound motorcycle flows are highest at the western end of the corridor, reaching approximately 350 motorcycles per hour just before Bricklayers Arms.

For comparison purposes, this is about twice as high as AM peak hour inbound powered two wheeler flows observed in 2013 along Whitechapel Road.

Powered two wheeler parking

Parking for motorcycles is not present on the main corridor but some of the side roads have dedicated free parking spaces as shown below. Parking provision is not considered a major issue for the current land uses, nevertheless, the future residential, office and retail developments are likely to attract and encourage additional motorcycle users.



Source: Parkingforbikes.com

KEY CHALLENGES

- > Limited dedicated parking
- > Tendency of weaving through traffic due to inconsistent provision of bus lanes

DESIGN CONSIDERATIONS

- > Provide, where possible, more dedicated parking or, where not feasible, allow for short term parking on the side streets
- > Ensure that the designs of options take into account the safety of powered two wheelers



Powered two wheelers during the morning peak hour

Freight movement

Currently, Old Kent Road provides access for a series of industrial and retail uses that generate various servicing and freight access requirements.

Larger sites have their own service yards, and there are loading bays available within the bus lanes during off-peak periods.

Many of the retail / commercial units on the corridor are unoccupied, or have limited opening hours.

It is anticipated that plans to deliver new housing, office and retail facilities along the corridor will increase the need for effective servicing and delivery arrangements.

The surveys undertaken for this study showed that the majority of freight traffic comes from light goods vehicles and only a small proportion of the total people mode share (2%) is represented by heavy good vehicles.

This traffic composition shows there could be potential for freight consolidation along the corridor.

Previous analysis undertaken by TfL highlights the strategic importance of the corridor for HGV and LGV movements in south-east London. Particularly the northern part of the corridor accumulates freight movements from the west and east and acts as a distributor of traffic at Bricklayers' Arms.

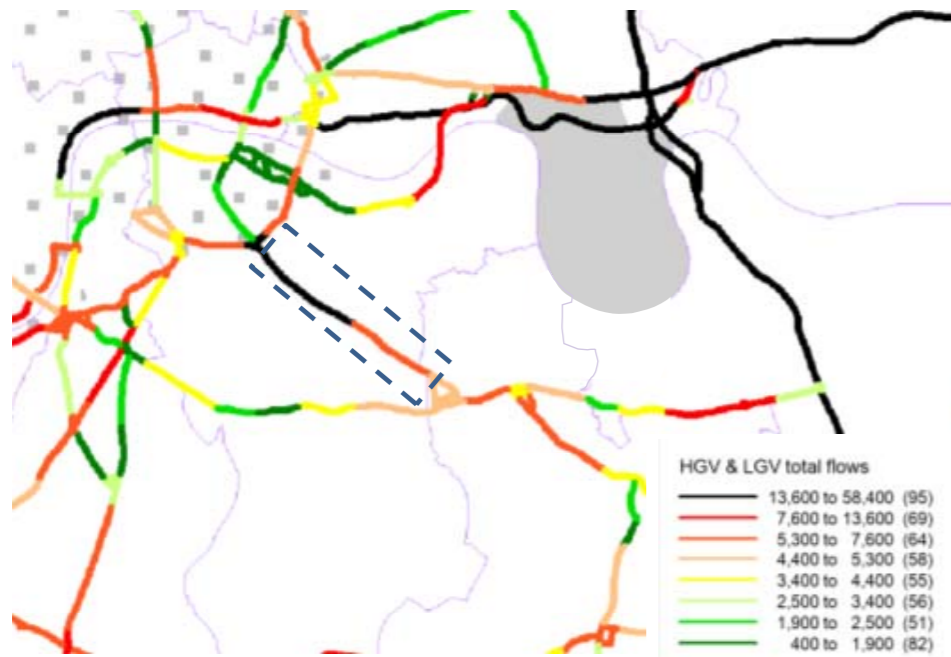
Although some of the HGV traffic generated along the corridor due to the current industrial land uses is expected to reduce in the future, the corridor is likely to remain an important freight route in and out of central London due to the proximity to various opportunity and growth areas. Also the Integrated Waste Management Facility located in the vicinity of Commercial Way is expected to remain for the foreseeable future, which means that it will continue to generate many refuse vehicle movements.

KEY CHALLENGES

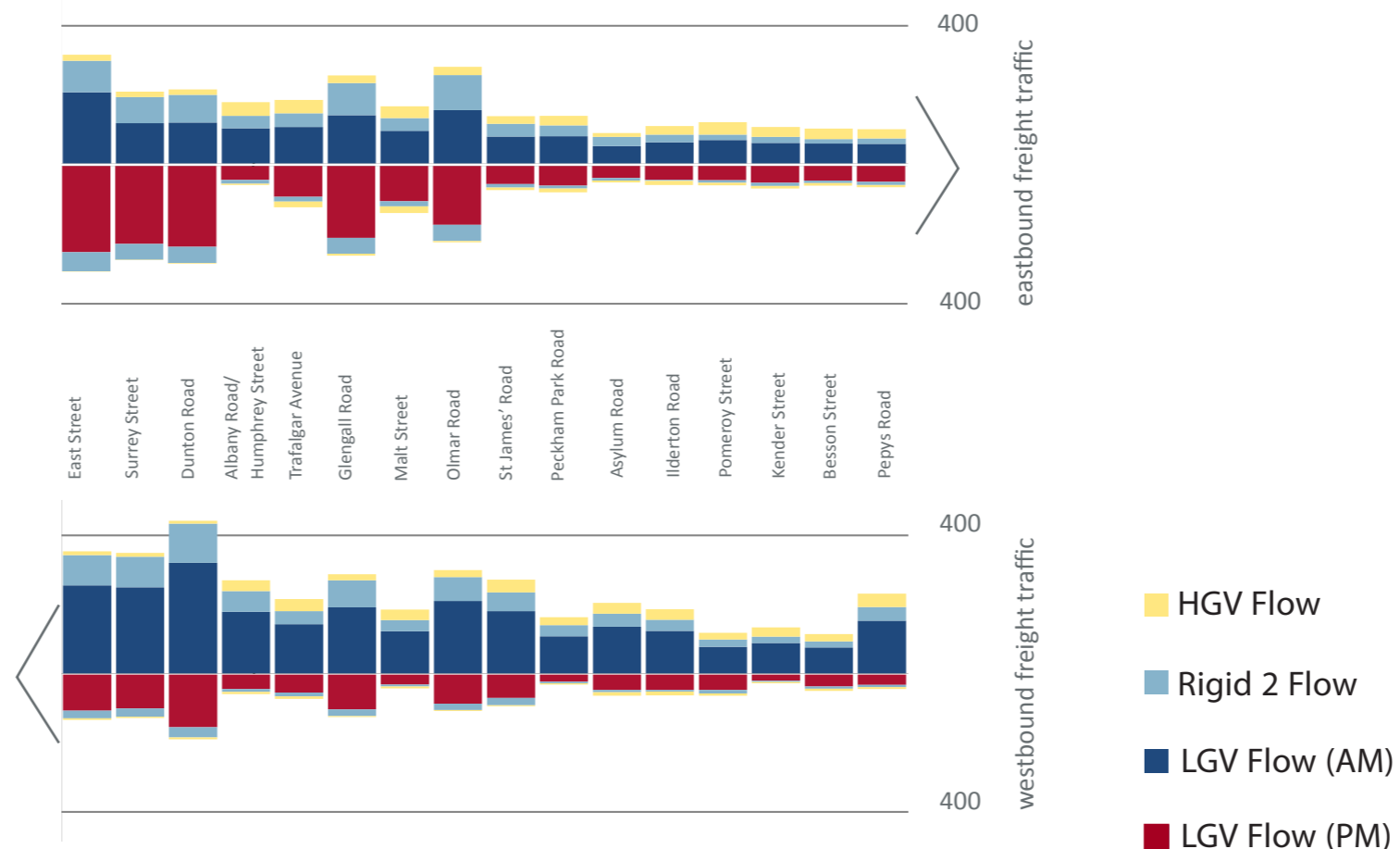
- > Limited road space will increase pressure on on-street servicing
- > Requirements for freight are likely to change together with the character of the road

DESIGN CONSIDERATIONS

- > Coordinate delivery and servicing plans for new developments
- > Investigate opportunities for freight consolidation
- > Consider alternative delivery and servicing schedules or technological options



Source: TfL



Source: Based on Traffic Surveys (November 2015), TfL Surveys (2014/2015)