Public Document Pack

Planning and Transportation Committee

Date: **MONDAY, 9 APRIL 2018**

Time: **10.00 am**

Venue: **LIVERY HALL - GUILDHALL**

12. **ROAD DANGER REDUCTION AND ACTIVE TRAVEL PLAN 2018 -2023**
Report of the Director of the Built Environment.

APPENDICES 1 AND 4

For Decision
(Pages 1 - 100)

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Lunch will be served in Guildhall Club at 1PM

John Barradell
Town Clerk and Chief Executive

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CITY OF LONDON

Road Danger Reduction and Active Travel Plan

2018 - 2023

Department of the Built Environment
City Transportation

Foreword

Chairman of Planning and Transportation Committee
Christopher Hayward CC

As the Chairman of Planning and Transportation, I am pleased to present our approach to reducing road danger and promoting active travel on our streets.

The ambition of this plan is to create a safer, healthier and more habitable City for everyone, whether resident, employee or visitor.

I am committed to reducing causalities on our street and aiming towards a vision of zero deaths and serious injuries. In recent years we have adopted several engineering measures such as redesigning Holborn Circus and the removal of the Aldgate gyratory thereby delivering safer streets and creating a new public square. We have commenced the radical and potentially transformative Bank on Safety experiment at Bank Junction. I have welcomed the new Cycle Superhighways and introduced the first cycling Quietway routes in the City of London.

We have made great progress in reducing the number of cyclist casualties on our streets even with the year on year increase in cyclist numbers. However, the same does not apply to pedestrians, where the growth in pedestrian numbers has resulted in an increase in pedestrian casualties. More radical action is clearly needed, and this document sets out our approach to delivering Vision Zero, a major component of the Healthy Streets Agenda.

The City is growing. The arrival of Crossrail and increased Tube line capacity will result in considerable increases in people walking, in particular on key routes and junctions. This Plan outlines ambitious actions to safely accommodate the rising numbers of those wanting to walk and cycle in this City.

The success of the UK economy requires the City of London to remain efficient and competitive as it grows. We want companies to continue investing in the City as one of the world's premier business locations because they can attract and retain the very best talent. We want to attract new visitors to enjoy the world-class destinations in the Culture Mile. It is imperative, therefore, that we base our strategy on the goal of eliminating death and injury on our streets and improving the experience of walking and cycling.

Contents

SECTION 1

INTRODUCTION, CONTEXT AND BASELINE

Executive Summary

Introduction and context

This is the City of London Corporation's second Road Danger Reduction plan following the first five-year plan in 2013. This Road Danger Reduction and Active Travel plan seeks to achieve a genuine reduction in danger for all, to make our streets safer and improve the quality of life for everyone in the City of London.

This plan seeks to be consistent with the 'Vision Zero' approach taken by the Mayor of London, with road danger targeted at its source, working towards the elimination of the number of people killed or seriously injured (KSI) on London's roads. The Mayor is committed to delivering the Healthy Streets Approach to enable more walking and cycling, helping to reduce levels of physical inactivity and associated health impacts.

The City is home to approximately 9,000 residents. Over 450,000 people work in the City and the majority travel to the Square Mile for work every day, reflecting the City's status as the pre-eminent global finance district. All of these journeys involve some walking. The growth of the City working population is predicted to rise further due to growing employment and new transport infrastructure such as Crossrail. The number of visitors to the Square Mile is also set to increase with initiatives such as the Culture Mile.

Since 2005 the total number of people killed or seriously injured on the City's roads has not changed substantially. However, there has been a shift in the mix of road user types killed or seriously injured. The number of journeys by bicycle has been increasing rapidly while the number of killed or seriously injured cyclists has fallen.

The number of serious injuries to pedestrians has however increased roughly in line with the growth in City commuters.

Targets

The City Corporation is adopting Vision Zero with the ambition that nobody is killed or seriously injured on the City's streets. To achieve this ambition we will adopt the Mayor of London's targets to reduce KSIs by 70% against 2010-14 levels by 2030, and eliminate all KSIs by 2041. We will set annual targets to be assessed on a three-year rolling average to meet the 2030 target with linear reductions; in accordance with best practice.

Targets for this strategy

By 2022 – no more than 35 people Killed or Seriously Injured (KSI)
By 2023 – no more than 33 KSI.
By 2030 – no more than 16 KSI.

Ten steps in five years towards a safer City

The City Corporation will take 'ten steps in five years' towards Vision Zero within three themes:

- *Theme 1: Engagement & behaviour change;*
- *Theme 2: Road danger reduction & vision zero;*
- *Theme 3: Active travel & healthy streets.*

The aim of these steps is to make walking and cycling both safer and more appealing. The safety and comfort of pedestrians is our number one priority, and all of the measures below are aimed at achieving this. This is the first part of a longer term strategy to achieve Vision Zero.

Theme 1: Engagement & Behaviour Change

STEP 1. Behaviour change: attitudes to travel programme:

We will develop a series of campaigns, programmes and events to influence the attitudes of road users. To achieve real reductions in KSIs, a change of culture is required.

STEP 2. Causal factors programme:

We will continue to work with the City of London Police (CoLP) to identify the causes and consequences of collisions in the City, with the objective of reducing risk factors. Understanding who is hurting whom, which modes are in conflict with which and where, will assist in identifying measures to address dangerous behaviours and locations.

STEP 3. Stakeholder engagement - Active City Network:

The Active City Network (ACN) has been established with the aim of getting more people walking and cycling more safely. We will grow the network, engaging with businesses, residents and visitor destinations to promote safer behaviours and projects to achieve these aims.

STEP 4. Road Danger Reduction Partnership (RDRP):

This established partnership, which is for the sharing of information at officer level between the CoLP, the City Corporation, Transport for London (TfL), London Fire Brigade, and the Greater London Authority will be continued. Two annual RDRP meetings will be chaired by the Chairman of Planning and Transportation to monitor progress and agree actions towards meeting targets.

Theme 2: Road Danger Reduction & Vision Zero

STEP 5. Targeted enforcement and research:

The City Corporation's works in close partnership with the CoLP and TfL to gather and analyse the data to apply an intelligence-led approach. The CoLP have a Road's Policing strategy which supports activities that aim to address the root cause of KSIs, focus on higher risk and vulnerable road users, and target criminality and offending on our roads.

STEP 6. Safer freight operation:

In 2017 we included Fleet Operation Recognition Scheme (FORS) as a requirement for the City Corporation's own suppliers. We will support our suppliers with the implementation of FORS through the provision of training workshops. We will work with the ACN to encourage City businesses to promote safer driving standards and training, best practice and research.

STEP 7. Safer riders:

We will support existing rider forums to engage with motor and pedal riders to better understand the issues and research opportunities to make riding safer. We will also promote cycle and powered two wheeler (P2W) training, maintenance, and issue advice on safer riding.

STEP 8. Safer drivers:

The City Corporation will work with its partners and City businesses through the ACN to raise awareness and encourage enhanced driver training for all drivers. We will also look to promote the specific behaviours that reduce collisions, for example the 'Dutch Reach' approach for taxi passengers, using the far hand when opening taxi doors.

Theme 3: Active Travel & Healthy Streets

STEP 9. Temporary timed closures of casualty hotspots:

The City Corporation will research opportunities for timed closures to certain classes of traffic. Areas with the highest density of active travellers, in particular those locations which are already road collision hotspots, will be prioritised.

STEP 10. Tactical urbanism active travel priority zones:

Through the use of temporary, low-cost interventions such as paint and planters to change the look and feel of the streets to prioritize active travel. While traffic will not be physically limited, motor traffic will be encouraged to travel at lower speeds and give way to people walking and cycling. These measures will be monitored, and if appropriate made permanent.

Current Initiatives

The City Corporation and its partners are already delivering a number of initiatives designed to reduce road danger and encourage active travel including:

- **Behaviour change programme:**

Encompasses enforcement against dangerous, careless and illegal motoring, pedestrian/ scooter training for children, cycle training (adult and child) and initiatives such as infrastructure launches. The City runs a community engagement programme through the ACN and run 'Exchanging Places' events to highlight bind spots and allow different road users to see streets from another person's perspective, (e.g. cyclists and lorry drivers).

- **City-wide 20mph zone:**

The 20mph speed limit was introduced across the City in 2014. It applies to all streets except Tfl-controlled roads including the A3211 between Victoria Embankment and Byward Street and the A1210 Mansell Street, Goodman's Yard and Minories. The City Corporation and CoLP will continue to raise awareness, enforce and encourage other boroughs to adopt this approach.

- **Bank Junction:**

Bank Junction was closed to motor traffic except buses, on a trial basis in 2017 providing much needed safety benefits while a longer-term solution is developed and consulted on as part of the All Change at Bank programme.

- **Freight partnerships:**

The City's 2013 Road Danger Reduction Plan introduced strengthened partnerships and contractor arrangements with freight and HGV operators through promotion and training on the national Construction Logistics and Community Safety (CLOCS) and Fleet Operator Recognition (FORS) schemes. Activities under this heading are continuing under City Mark.

- **Safer Urban Driving:**

The City has been supporting the Safer Urban Driver training of goods vehicle drivers, which includes a four-hour cycle ride through the City.

Conclusion

This strategy is about people. People look to the City Corporation to lead by example and demonstrate progress. The entire UK economy is reliant on our investment in the City as a campus for companies that want to locate here because they can attract and retain the very best talent. The ability to move safely is therefore a priority. If we want to reduce danger and deliver Vision Zero we need to work in partnership to change attitudes and raise awareness about road danger. The City Corporation is committed to preventing fatal and serious injuries as a priority through this Road Danger Reduction and Active Travel plan.

Introduction

This Road Danger Reduction and Active Travel plan has been developed with the ambition of the City Corporation meeting the Vision Zero objectives outlined in the draft Mayor's Transport Strategy, whereby the annual number of people killed and seriously injured in traffic incidents is zero before 2041. To meet this challenging target, this plan proposes a number of behaviour change, enforcement, engagement and engineering initiatives that support safer travel by active modes whilst reducing road risks at source.

The City of London Corporation supports and encourages increased levels of walking and cycling on the City of London's streets that have taken place in recent years and is committed to the safety and comfort of those travelling by active modes. Alongside the increase in the numbers of journeys by active travel, there has been an increase in the number of people killed or seriously injured (KSI) on the City of London's streets, an issue the Corporation takes very seriously indeed. Through the Road Danger Reduction and Active Travel plan, we are seeking to achieve our ultimate vision of zero collision fatalities, a reduction in the severity of collisions, as well as improved health and quality of life for those living, working and spending leisure time in the City of London.

Each road death is an unacceptable and a potentially preventable tragedy, and many serious injuries are life-changing, some of which require lifetime care. It is not only the victims of incidents who are affected; so too are their families, friends and loved ones.

People do not purposefully go out of their way to cause injury. Instead, each is a consequence of one or more contributory factors including simple coincidence, inattention, mistakes made by one or more parties, incorrect judgement and perception of risks, inappropriate behaviours, distraction and simply the speed of events unfolding combined with the human inability to focus in all directions at the same time.

A mixture of behaviour change, engineering interventions and vehicle design changes are needed to enable all road users to take care of their own and others' safety, although the primary responsibility lies with those who present the greatest risks to the most vulnerable road users.

The way people travel in the City is changing, with a substantial increase in the number of people choosing to cycle. Coupled with this, the daytime population of the City has been increasing and is predicted to continue to rise. As over 90% of trips are made on foot within the Square Mile, providing a safe environment for pedestrians is a priority. Consequently, the Road Danger Reduction plan establishes momentum for delivering a safe environment for active travel to achieve absolute casualty reduction figures and the wider objective of accommodating rising active travel demand.

This document has been drafted by the City of London Road Danger Reduction team in partnership with the City Road Danger Reduction Partnership (RDRP), a working group of public sector organisations that have a mutual interest in reducing danger on the City's streets by addressing risks at source.

Achieving Vision Zero through a Road Danger Reduction Approach

The City of London Corporation, as a local highway authority, has a legal duty under Section 39 of the Road Traffic Act 1988 to investigate, promote and implement road safety measures.

Vision Zero

The consultation draft Mayor's Transport Strategy sets a 'Vision Zero' target for the number of people killed or seriously injured on London's roads. Vision Zero is a strategy widely adopted throughout Europe and North America to eliminate all traffic fatalities and severe injuries[1].

Vision Zero is based on five key principles:

- **Safety:** people make mistakes, and this should not result in death or serious injuries. Action should be taken to reduce opportunities for error and reduce the extent of harm.
- **Ethics:** human life and health have the highest priority.
- **Responsibility:** those who design and manage road systems share responsibility with road users.
- **Mechanisms for change:** all those responsible for safety (including road users and stakeholders) should be ready to achieve safety, just as they would in the workplace.
- **Active healthy travel** - because death and illness from inactivity are a financially and socially costly impact of unsafe environments that discourage walking and cycling.

Road Danger Reduction – a modified approach to road safety

The concept of Road Danger Reduction (RDR) has been promoted in the UK by the Road Danger Reduction Forum since 1993. The approach is born out of the recognition that the traditional road safety approach, based on simple reductions in the number of casualties and collisions has its limitations. For example, in a traditional road safety approach, a decline in the number of collisions causing pedestrian casualties could be the product either of a declining number of pedestrians or safer behaviours by road users[2] .

The key to making roads safer is the reduction of the speed, volume and dominance of motor vehicles. RDR targets the vehicles bringing most danger as they hold the most responsibility. The aim is reducing the number of people injured and also reducing intimidation of vulnerable road users by motor vehicles, which may cause them to make mistakes. The desired outcomes of RDR are safer streets, which are good for the environment, and for personal and public health.

[1] https://visionzeronetwork.org/about/what-is-vision-zero/ accessed October 2017
[2] https://rdrf.org.uk/about-2/ accessed October 2017

This Road Danger Reduction and Active Travel plan seeks to achieve a genuine reduction in danger for all, to make the City's streets safer and improve the quality of life for everyone in the City. To achieve this the City of London will address road safety in a broader sense and committed to:

- Promoting appropriate speeds and manage traffic better, thus benefiting the environment by cutting traffic emissions and pollution as well as reducing noise.
- Implementing and engineering solutions to improve safety at locations with the highest risk, including the removal of gyratories and junction remodelling.
- Promoting cycling and walking by providing traffic management solutions and road safety education and training programmes.
- Working in partnership with the City of London Police to tackle road crime such as careless and dangerous driving and speeding.
- Provide a road safety education and training package that will instil safe road user attitudes and behaviour from an early age in City of London schools.
- Developing City road safety publicity campaigns and national campaigns to reflect the City's particular needs.

Healthy Streets

Reducing the danger and intimidation to people who choose to walk and cycle is essential to delivering the Healthy Streets Approach.

Most people do not take sufficient exercise to enhance their health or well-being, leading to acute and chronic illness. The perception of danger is cited by organisations such as National Institute of Health and Clinical Excellence as the main obstacle to encouraging more walking or cycling.

Reducing Road Danger is core to the Healthy Streets Approach and supports the delivery of multiple indicators including: people feel safe, clean air, easy to cross, people choose to walk and cycle, not too noisy, people feel relaxed.

Definitions

Injury incidents are classified as follows for the purpose of national statistics:

- A fatal injury is one which causes death less than 30 days following the collision taking place.
- A serious injury is one which does not cause injury (or death within 30 days following the collision) and includes head injury, broken neck, back, loss of limbs, deep penetrating wounds and broken limbs.
- A slight injury is any injury which is neither 'fatal' nor 'serious', for example, sprains, bruises, or slight shock requiring roadside attention.

Healthy Streets Indicators

Fig 1. Source: Lucy Saunders – the indicators of the Healthy Street

Context

City of London Corporation policy

This Road Danger Reduction and Active Travel Plan will help the City Corporation deliver against a number of other key policy objectives.

1. City of London Road Danger Reduction Plan 2013

The Road Danger Reduction plan was adopted in 2013, building upon the 2007 Road Safety Plan. The transition to a 'Road Danger Reduction' plan was intended to emphasise the plan's focus on addressing road dangers at source rather than keeping vulnerable road users out of the way of road danger through excessive segregation.

2. City of London Local Implementation Plan 2017-21

The 2013 Road Danger Reduction plan forms part of the Local Implementation Plan (LIP). A statutory document setting out how the City Corporation, as a local highway authority, will implement the Mayor's Transport Strategy and utilise TFL funding to meet regional goals and objectives. Development of the LIP is finalised once the Mayor's Transport Strategy is published.

3. City of London Local Plan January 2015

The Local Plan is the City Corporation's spatial framework setting out the vision, aims and objectives for planning policy in the City and includes policies for deciding development proposals. A core strategic priority of the Local Plan is to ensure that transport systems are designed to reduce conflict between the high and growing volume of pedestrians and other road users. The City Corporation seeks to achieve this by considering safety within the design of transport schemes and by creating more traffic-free and traffic-calmed areas for pedestrians and cyclists.

4. City of London Air Quality Action Plan 2015-20

An Air Quality Action Plan has been implemented to address poor air quality and, in general, the efficiency of public transport is recognised in relation to limited road space. The Air Quality Action Plan 2015-2020 states that the City of London has some of the poorest air quality in England. The Road Danger Reduction and Active Travel Plan aims to reduce traffic and shift to non-motorised modes.

5. Joint Health and Well-being Strategy 2017-18 to 2020-21

The City Corporation with neighbouring boroughs has prepared a Joint Health and Wellbeing Strategy [3]. It aims to improve the physical and mental health, and well-being of residents and visitors. This includes a 'health and safety' approach to reducing road danger and enabling more active travel.

[3] City of London Corporation: Joint Health and Wellbeing Strategy 2017/18-2020-21 (in draft)

6. Mayor's Transport Strategy (consultation draft 2017) – Healthy Streets & Vision Zero

The Mayor's Transport Strategy consultation draft marks a shift towards the road danger reduction approach and the adoption of Vision Zero. Targeting road danger at its source by ensuring street environments incorporate safe speeds, safe people, safe design and safe vehicles. With Vision Zero, the road danger reduction approach is integral to the delivery of all schemes on the City's streets. The Mayor's aim is for all deaths and serious injuries from road collisions to be eliminated by 2041.

Baseline

The City is the historic centre of London, and is also home to the leading financial centre in the world. There are fewer private cars than in other parts of London, and a higher density of pedestrians and cyclists, particularly at peak times, than anywhere in the country.

Population and growth

The City has a resident population of approximately 8,000 people [4] and a very substantial population of workers commuting into the Square Mile every day. The City's success is reflected in its continuing growth as a commuter destination. There has been significant recent growth from 356,600 workers in 2010 rising to 454,700 by 2015, a 22% increase over the period.

At the time of writing, 111 new office developments with a floor space of over 10,000 sq ft have been identified or are under construction. In addition, a large number of smaller offices are either being created or refurbished within the existing building stock. As London's population increases, the importance of the central activity area is also rising.

Increased public transport capacity is bringing more pedestrian travel demand

Crossrail, together with increased capacity on London Underground and Thameslink, will put extra pressure on existing pedestrian facilities. Recent casualty trends show that an increase in pedestrian casualties mirrors the increase in employment numbers. With predicted further increases, reducing risk of injury to pedestrians is the priority for this strategy.

The predicted increase in demand is illustrated by a recent Space Syntax report (2016), which shows the strongest demand, present and future, in areas surrounding the new Crossrail station entrances, Bank Station, London Bridge and on Bishopsgate (Fig. 2).

Crossrail will double the numbers exiting Farringdon Station from around 50,000 to over 100,000 passengers per annum for example, with similar numbers expected to exit Moorgate/ Liverpool Street [5]. Existing footways are unlikely to be able to absorb this demand, and therefore it seems inevitable that there will be additional overspill onto the carriageway, resulting in further conflict with motor vehicles and cycles.

Tube line capacity will also rise. On the London Underground, projected capacity increases between now and 2020 will result in an increase of 40 trains per hour, with further increases projected towards the 2040s. New generation train stock will operate every one to two minutes and is capable of carrying 827 passengers [6.]

[4] City of London (2016) *City of London Resident Estimates and Projections*
[5] Via www.crossrail.co.uk

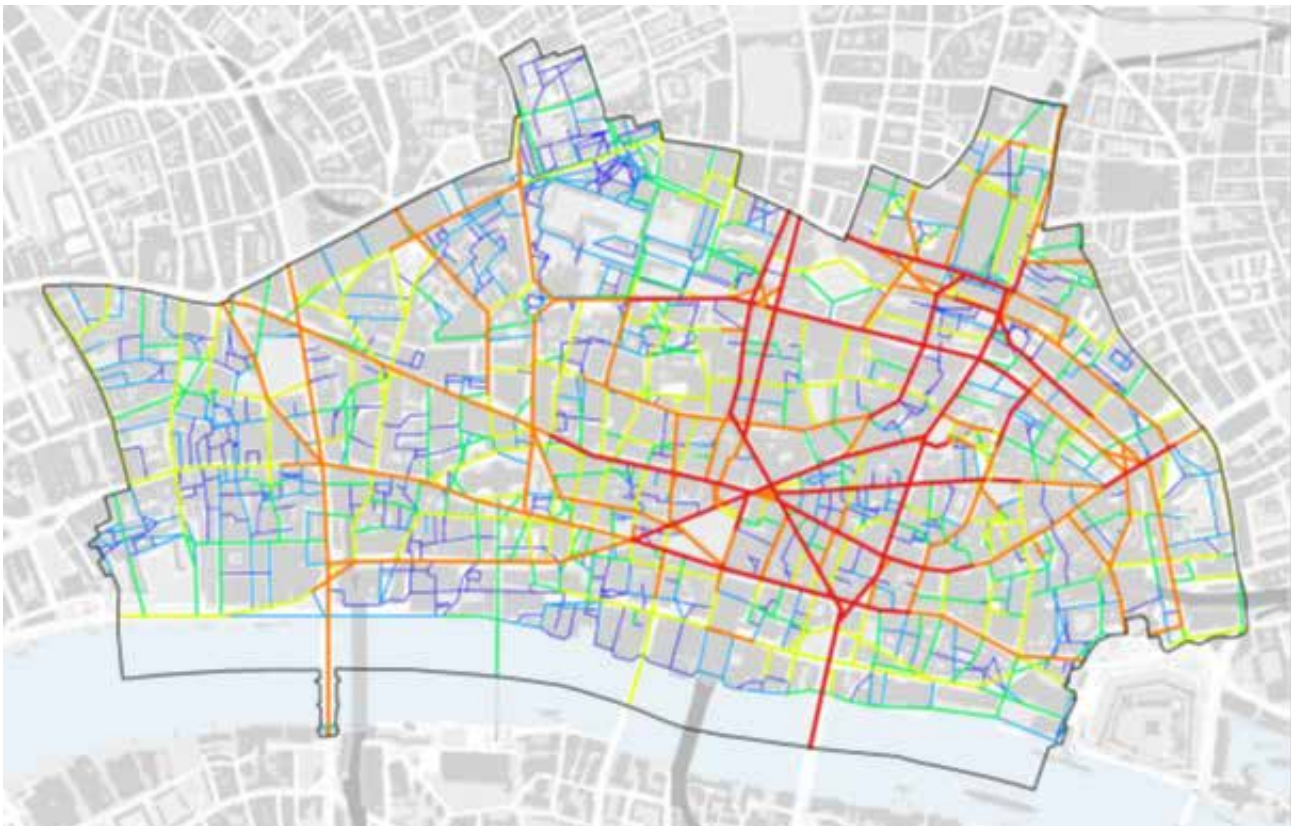

Fig 2. Space Syntax pedestrian demand modelling: 2026 projected. Red=highest flows.

Changes in travel in the City

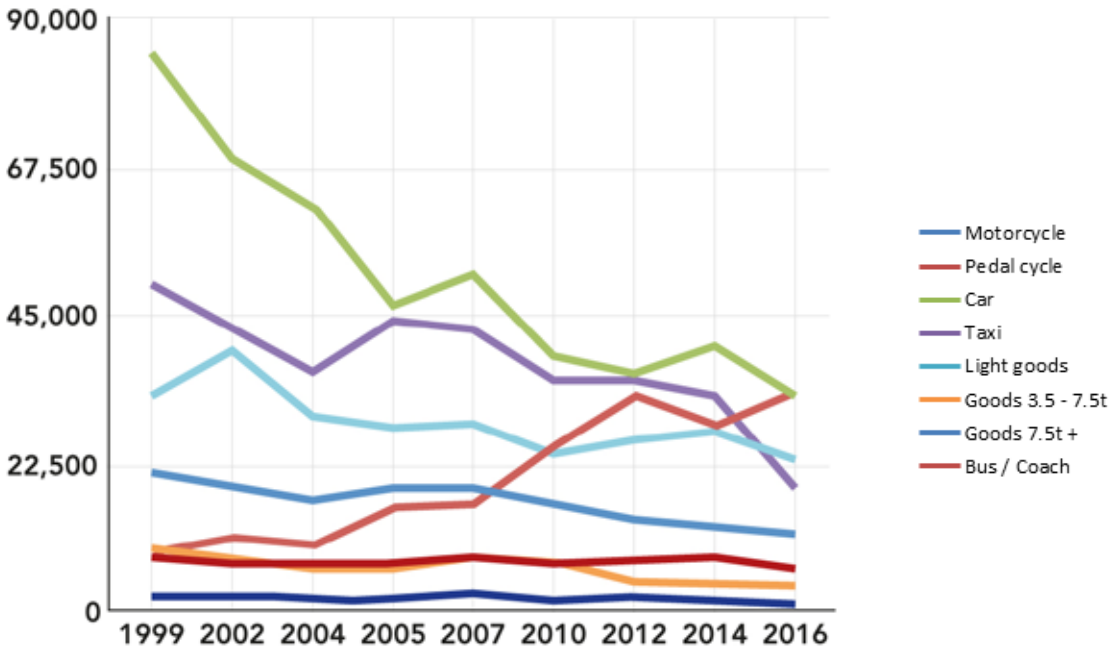

Fig 3. Screenline counts since 1999. The numbers of cars and taxis have approximately halved during the period, whilst cycling has tripled.

[6] https://tfl.gov.uk/corporate/about-tfl/what-we-do/london-underground/rolling-stock
CoL Screenline Counts total flow 0700-1900 (undated) from Traffic in the City report 30/11/2016

Over the past ten years the number of all motor vehicles on the City streets has reduced. The most significant change is the almost three-fold increase in cycling, which in 2016 overtook cars to become the most common vehicle type on City streets (Fig. 3).

Heavy and medium weight goods vehicles together make up only 5% of the traffic mix passing through the City screen-lines. Light goods vehicles account for 18% of traffic . Despite their relatively low number, goods vehicles are a significant contributor to collisions which cause death or serious injury to cyclists and pedestrians.

Changes to the profile of Killed or Seriously Injured casualties

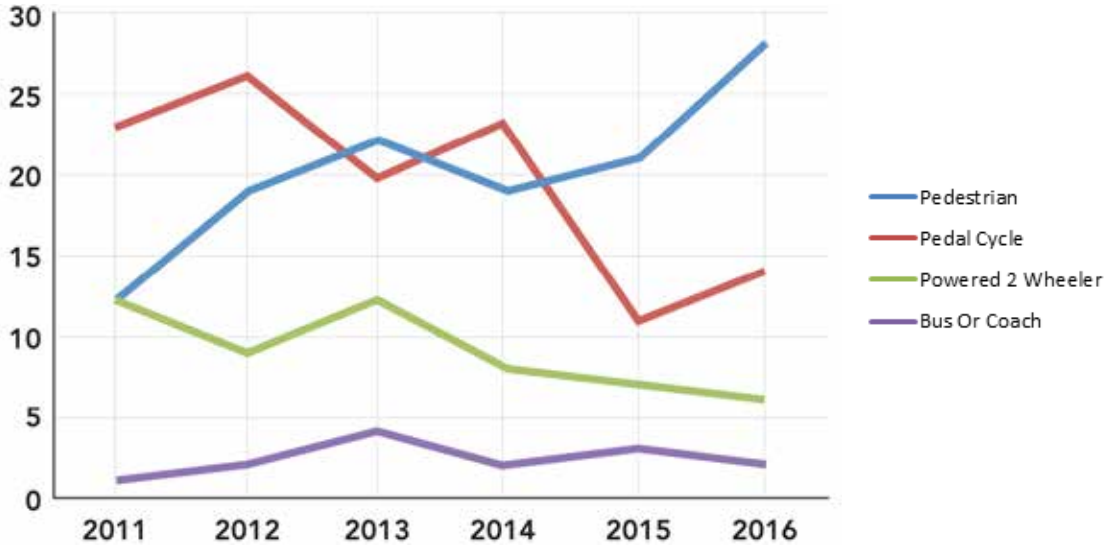

Figure 4. Trends - Killed or Seriously Injured (KSI) collisions by mode CoL 2011-2016

Since 2005 the total number of KSI road users in the City of London has not changed substantially. However, there has been a significant shift in the make-up of the numbers.

While the number of journeys by pedal cycle has been increasing rapidly, the number of cyclist KSIs is showing a downward trend (Fig. 4).

Since 2010 the number of pedestrian trips has also been rising, and the numbers being KSIs is rising in line with number of trips (Fig. 4).

There has been a 22% increase in pedestrian KSI between the 2009 - 11 and 2014 – 16 baseline data which mirrors an approximate 22% increase in City worker population in the same period.

Targets

Vision Zero targets

The City Corporation's current position is to pursue the Mayor's objective of Vision Zero and eliminate all KSI by 2041.

We will adopt the 2030 target of reduction of 70% of KSI against 2010-14 levels. This would give us a target of 16 killed or seriously injured people in the City of London by 2030. We will set annual targets to be assessed on a three-year rolling average to meet the 2030 target with linear reductions.

The RDRP will publish an annual Road Danger Reduction and Active Travel report that will set out our progress towards the delivery of these targets and set targets for the year ahead. Based on the figures below, our first target for 2018 will be 46KSI which is a 7.5% reduction from 2014 – 2016 average.

Targets within the Draft Mayors Transport Strategy

By 2041 we aim to achieve the Mayoral target of zero fatalities and serious injuries in the City of London.

The Mayor's Transport Strategy also sets interim targets for 2022 and 2030:

1. By 2022 reduce KSI by 65% against 2005-09 levels.
   For the City of London this equates to approximately 18 KSI

2. By 2030 reduce KSI by 70% against 2010-14 average levels
   For the City of London this equates to 16 KSI

3. By 2041 eliminate all fatal and serious injuries.

Figure 5 plots the three targets for getting to Vision Zero in the City of London. All reductions begin at the current 50 KSI per year baseline and finish in 2041 at zero. This shows that to meet the 2022 target, we would require a fast reduction followed by a plateauing to 2030.

The Square Mile now has higher rates of active travel than elsewhere in London or the UK. While the probability of serious injury to vulnerable road users has been reduced, absolute numbers of KSI casualties have risen slightly. Thus, whereas most London Boroughs have seen reductions in KSI, the City has seen an increase between the two baseline dates. Increases were also seen in Islington, which together with the City has the lowest total levels of absolute KSI numbers. (Fig. 6 and Fig. 7).

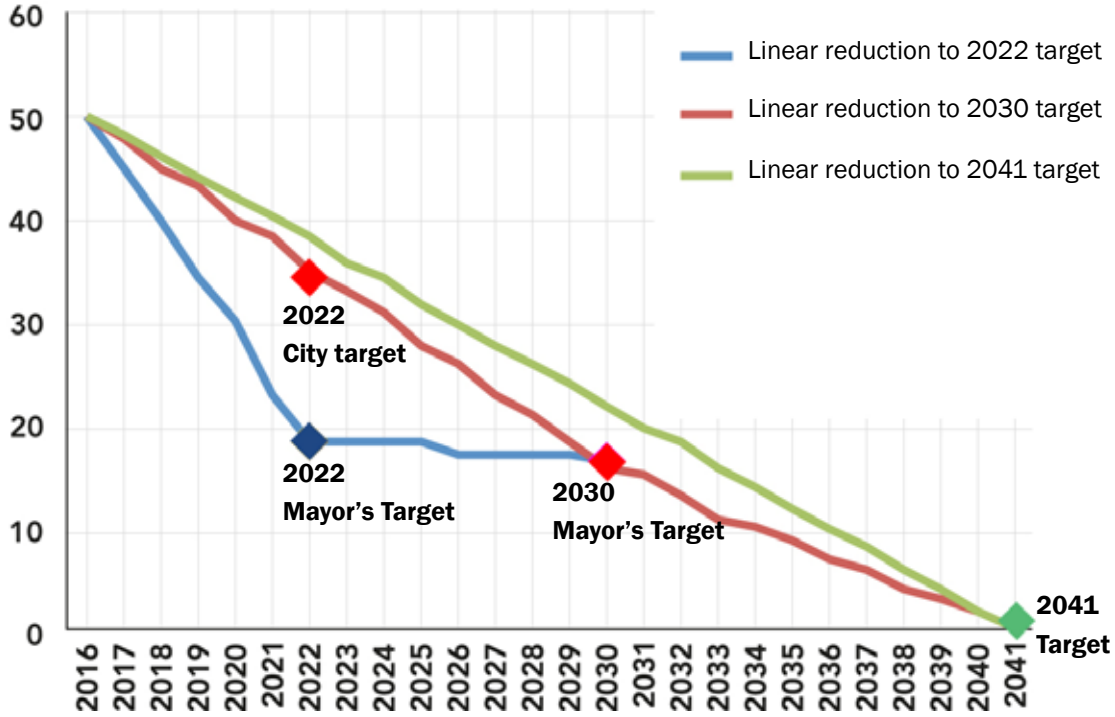

Figure 5. Meeting the Vision Zero targets - comparison of options

The 2022 target (Fig. 6) of a 65% decrease from the 2005-9 average presents a significant challenge to the City Corporation and its partners. Considerable resources have already been invested in Road Danger Reduction, which successfully catered for a substantial increase in cycling and walking.

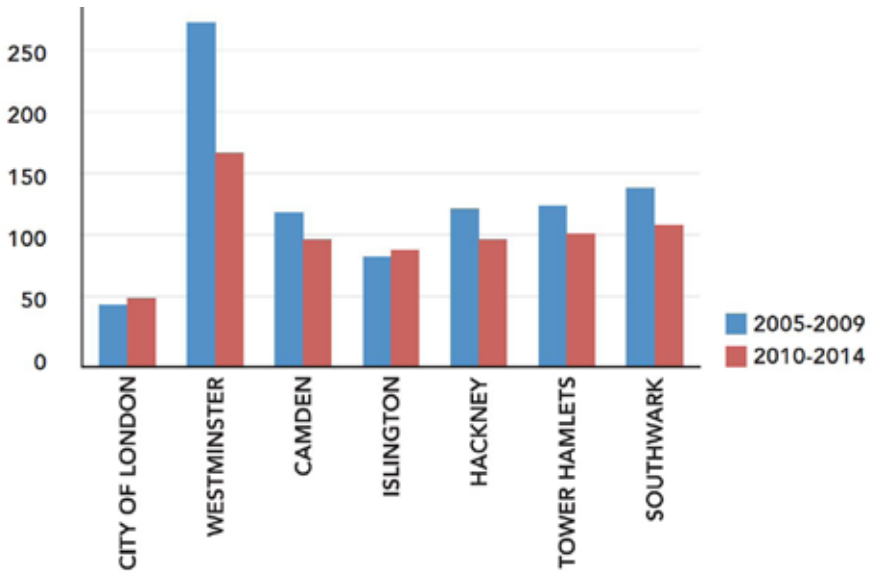

Figure 6. TfL Baseline comparison London Boroughs and City

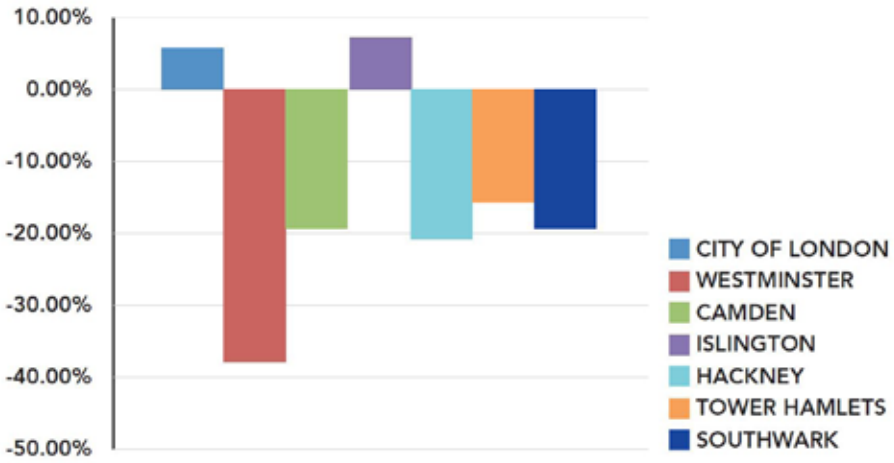

Figure 7. TfL Baseline comparison London Boroughs and City

Vision Zero is about protecting people and preventing injury. It is based on organising transport systems that reduce the opportunity and likelihood for harm, rather than statistics. Having achievable targets are, however, important to monitor progress. Therefore, the City of London will adopt the 2030 interim target and aim to meet the Mayor's 2041 vision.

Wholesale changes to the street layout will take time, and while behaviour change and stakeholder engagement will have an impact, expectation of such radical cuts to KSI within five years seem unrealistic.

However, recent figures show we are making headway, and our engagement through the Active City Network is helping to prepare the way for potentially more radical engineering approaches in the medium to long term.

THE NEED FOR AN AMBITIOUS APPROACH TO RDR & VISION ZERO

Who is hurting whom?

The supporting document 'City Etiquette - Analysis of KSI Collisions' disaggregates Police collision data by recorded causes. The persistent increase in pedestrian KSI numbers may be linked to drivers, P2W riders and cyclists failing to anticipate pedestrian behaviours and movements by slowing down, being courteous and taking due care combined with:

- Increased crowding of footways, leading to pedestrians spilling out onto the carriageway.
- Long wait times at pedestrian crossings, leading to chance-taking.
- Pedestrians obscured when crossing from between parked and queuing vehicles with motorists failing to see/anticipate a crossing pedestrian.
- Pedestrian/cyclist conflicts caused by pedestrians moving through congestion and failing to anticipate filtering cyclists and powered-two-wheelers and vice-versa.

Cyclists KSI almost halved in the period 2013-2015 (Fig. 8) and the risks to individual riders is also reducing. However, cyclists accounted for six of the nine fatal injuries in the past five years, and reducing cycling KSI therefore must remain a core focus of our work.
The analysis also shows vehicle involvement by location.

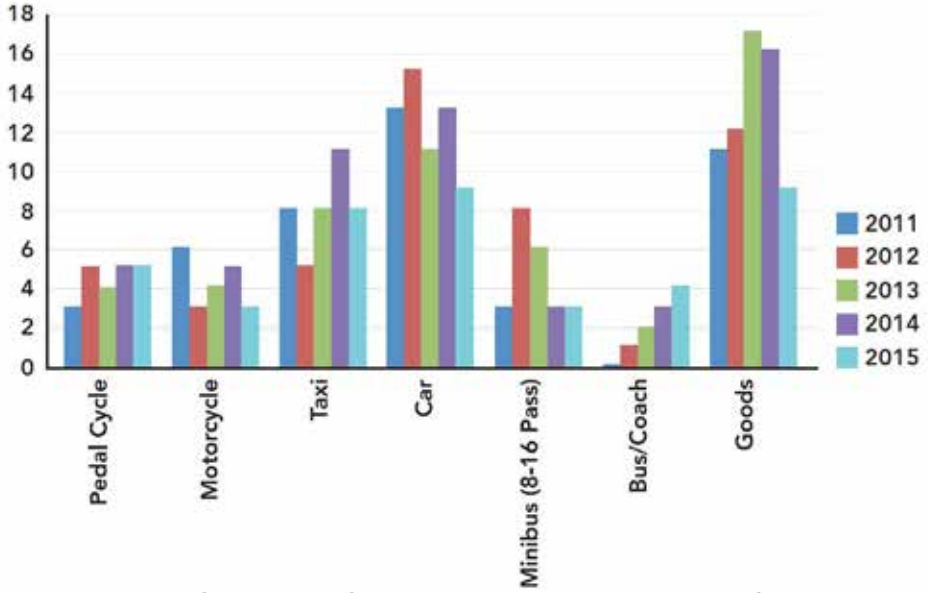

Figure 8. Who is hurting whom – City annual KSI by mode involved (not the mode of the injured party)

In aggregate, motor traffic inflicts the most injuries on vulnerable road users, with taxis, cars and goods vehicles causing the most harm. Harm done by cars has been falling, but this is broadly consistent with the drop in number of cars crossing the City screen-lines since 1999.

The introduction of stricter standards for driver training and FORS certification as a condition of contract and planning permission for new development may have influenced a sharp drop in harm caused by goods vehicles - but a longer term trend is not identified.

Meanwhile, harm caused by motorcycles and taxis has fluctuated but remained relatively constant. Harm caused by cyclists has remained constant on average even with increasing ridership.

Where are people being hurt?

The collision report[7] helpfully sets out where the main clusters of collisions are occurring. The main clusters are at:

- West Smithfield/Farringdon Junction (cyclist/motorcyclists involvement);
- Fleet Street/Farringdon Street (cyclists);
- Temple Avenue/Victoria Embankment (motorcyclists);
- London Wall/Moorgate (motorcyclists and pedestrians);
- Bishopsgate (pedestrians);
- Bank Junction (cyclists);
- Cannon Street/King William Street/Monument junction (cyclists);
- Fenchurch Street/Gracechurch Street (pedestrians and motorcyclists).

These recorded clusters do not take into account the recent implementation of Cycling Superhighways (north-south, at Blackfriars; and east-west along Lower Thames Street). The success, or otherwise, of these schemes will be judged at least three years following their completion in 2015, with the northerly extension of the north-south route programmed to start in Autumn 2017.

Conclusions

The evidence presented in this chapter underlines issues that the road danger reduction approach needs to address, including:

- An increasing weight of demand for walking and cycling;
- Ongoing increases in the number of pedestrians killed and seriously injured and slightly injured in road collisions – in line with increase in number of pedestrian trips;
- An ongoing reduction in the number of motor vehicles, with cyclists now surpassing the number of private cars crossing the screen-lines from 2016 and providing opportunities to expand public spaces for people.

[7] SDG mapping injury collision report from 2011 – 2016 published 2017

SECTION 2

IMPLEMENTATION PLAN FOR ROAD DANGER REDUCTION, VISION ZERO, HEALTHY STREETS AND ACTIVE TRAVEL

IMPLEMENTATION PLAN

In this Section we summarise our current and programmed projects and introduce a strategic programme of activities to be developed and implemented over the five-year lifespan of this Road Danger Reduction and Active Travel Plan.

In this ambitious five-year plan we will deliver ten steps in five years grouped under three themes. Each theme comprises a set of identified challenges, opportunities and measures.

Current projects

The City of London Planning and Transportation Committee approved the Road Danger Reduction Plan in 2013 and a significant amount of work has been done and is ongoing. Catering for the rapidly rising numbers of VRU without increasing death or serious injury is an achievement, and recent trends suggest we are beginning to see an absolute reduction in KSI numbers. The following projects are recently completed or ongoing.

Behaviour Change Programme

The City of London Corporation works in partnership with the CoLP, local schools and employers to deliver an ongoing behaviour change programme. This encompasses enforcement against dangerous, careless and illegal forms of motor vehicle use, pedestrian/scooter training for children/cycle training (adult and child), events and initiatives such as infrastructure launches.

We also run a community engagement programme through the ACN and provide 'Exchanging Places' events addressing the most common causes of KSI and allowing different road users to see streets from another perspective, (e.g. cyclists and lorry drivers). This programme will continue throughout this strategy period.

City-wide 20mph zone

The City-wide 20mph speed limit was introduced across the Square Mile in July 2014. It applies to all streets except TfL controlled streets, including the A3211 between Victoria Embankment and Byward Street and the A1210 Mansell Street, Goodman's Yard and Minories.
An interim study into the effects on safety of the lower speed limit was completed by consultants TMS . Since the introduction of the speed limit, there has been a reversal in the long-term upward trend of KSIs. The report notes areas of continuing concern and further monitoring, particularly:

- Collisions involving HGVs and cyclists;
- Collisions involving HGVs and pedestrians;
- The need to understand more about causal factors in cyclist/pedestrian collisions including the influence of increasing numbers of pedestrians and cyclists.

[3] City of London Corporation: Joint Health and Well-being Strategy 2017/18-2020-21 (in draft)

Bank Junction

Bank Junction was closed to all motor traffic except buses, on a trial basis in May 2017. The results of this trial will influence the direction taken by this emerging road danger reduction and active travel strategy in terms of the types of project that can be trialled and implemented.

Freight partnerships

The City Corporation's 2013 Road Danger Reduction Plan strengthened partnerships and contractor arrangements with freight and HGV operators through promotion and training on the national Construction Logistics and Community Safety (CLOCS) and Fleet Operator Recognition (FORS) schemes. Activities under this heading are continuing and are described in Chapter 5.

Safer Urban Driving Courses

The City Corporation has been supporting the Safer Urban Driver training of goods vehicle drivers, which includes a cycle ride of at least four hours through the City. This and other awareness-raising activities with drivers is likely to have had a positive impact on reducing harm to cyclists. Whilst the situation is positive, without sustained action absolute numbers of collisions involving cyclists could return to the mean average.

Planned projects

Planned engineering before 2022/23

A number of schemes are planned to start or end by the 2022/23 financial year. The schemes are primarily focused on delivering better and safer conditions for active travel:

- Bank Junction - completion of temporary and delivery of permanent scheme;
- Aldgate gyratory;
- Quietways Phase 1 and 2 for cyclists;
- St. Paul's gyratory;
- Network performance – small improvement schemes of under £1m;
- Eastern Cluster public realm improvement.

Schemes on the TfL managed road network, which start in this period:

- Bishopsgate project;
- Extension of north-south Cycle Superhighway (Farringdon Road).

Planned interventions

Annual budgets and detailed programmes will be prepared to guide the implementation of the strategic measures listed here. Detailed programmes may bring differences, but they will nonetheless generally be in line with the themes expressed in the strategic programme and policy commitment to Vision Zero and Road Danger Reduction.

Ten steps in five years towards a safer City

The following work programmes can be summarised as delivering 'ten steps in five years'. These ten steps, integrated with the three high level themes below, demonstrate how we will meet the challenges and measures over the strategy period.

Theme 1: Engagement & Behaviour Change

Step 1. Behaviour change: attitudes to travel programme;
Step 2. Causational factors programme;
Step 3. Stakeholder engagement: Active City Network;
Step 4. RDR partnership.

Theme 2: Road Danger Reduction & Vision Zero

Step 5. Targeted enforcement;
Step 6. Safer freight operation;
Step 7. Safer riders;
Step 8. Safer drivers.

Theme 3: Active Travel & Healthy Streets

Step 9. Temporary timed closures of casualty hotspots;
Step 10. Tactical urbanism active travel priority zones.

THEME ONE:
Engagement and behaviour change

1. Behaviour change: attitudes to travel programme

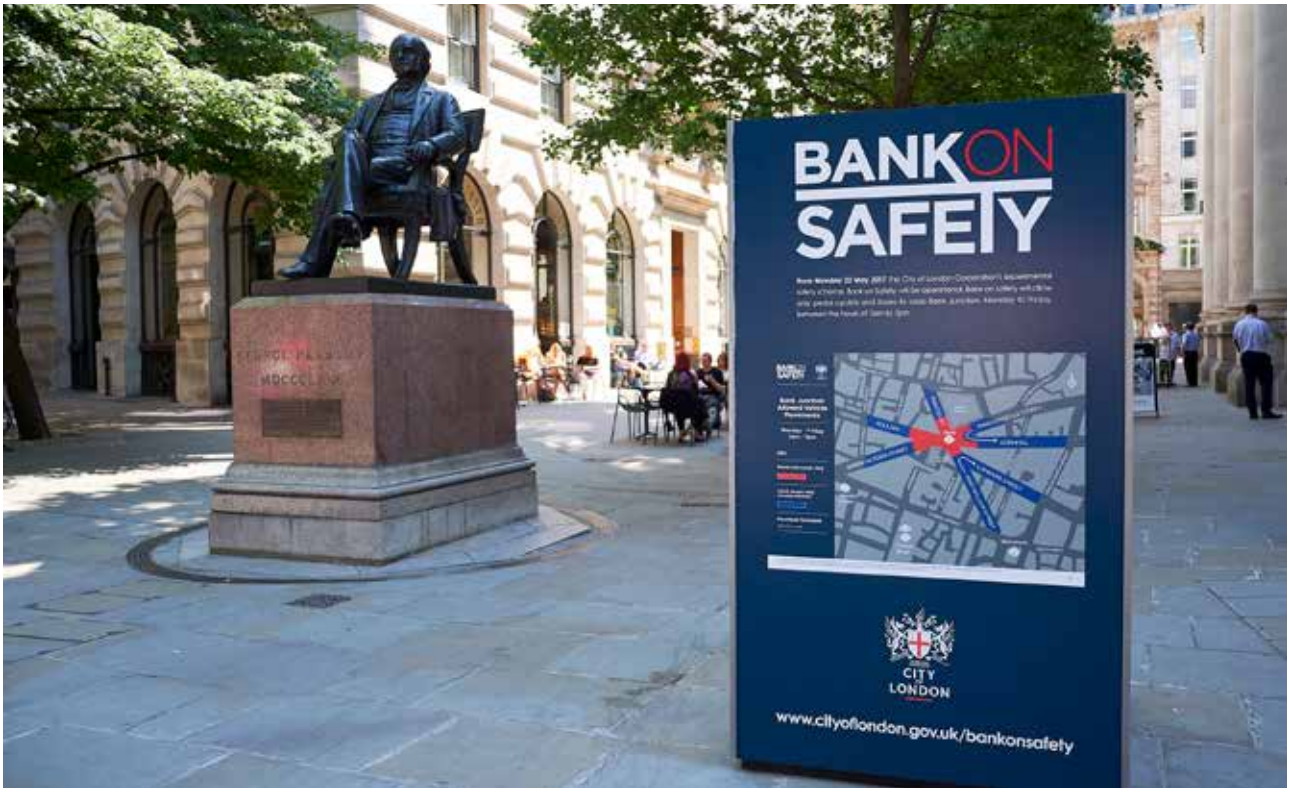

Figure 9. Being safe is up to all of us working together, with emphasis on those road users and behaviours that pose the greatest risk to others

The first step towards safer streets is to influence the attitudes of road users. To achieve real reductions in road injuries, there needs to be a change of 'culture' where motorists and cyclists make the safety of pedestrians their number one consideration. Aggressive riding or driving should become socially unacceptable. A 'social norms' campaign will require many years of repeating the key messages to drive or ride slowly and safely.

The City of London is a destination, not somewhere for motor vehicles to pass through on the way to somewhere else. When arriving in the City of London, we want all our road users (delivery drivers, motorcyclists, cyclists and taxi drivers) to feel like guests and behave courteously to each other. Within this exceptional place, we will promote a code of conduct for all road users. We will promote a general understanding that due to the incredible number of people on foot, there is a strong chance a pedestrian could step out into the road, and motorists and cyclists need to 'Be Brake Ready', riding or driving at a pace where collisions will not result in serious injury.

Social Norms marketing programme

Being courteous and polite is a hallmark of British culture, which is renowned worldwide. We, therefore, propose the development and promotion of **The City Etiquette Guide** for all street users.

People's behaviour is influenced by the perception of how their peers think. As with drink driving, we are trying to give permission to the silent majority to challenge poor and potentially dangerous behaviours. We will use high profile promotions to raise awareness of behaviours which lead to collisions, and promote the City Etiquette principles.

- Be Aware;
- Look Around;
- Be considerate;
- Less Haste.

Each of these themes will be developed into specific actions that people are asked to avoid. We will draw on the real experience of travelling in the City to give the campaign resonance. A number different platforms and approaches will be used for engagement: video, web, events and marketing throughout a five year period as we develop this campaign. The quantifiable outputs will include awareness and change of attitudes, measured through surveys and media coverage.
It is estimated a successful campaign will reduce 2 KSI in 5 years

The Active City Network of City employers (outlined in detail below) will be central to the engagement of both the drivers, riders and pedestrians to this programme. The majority of cyclists and pedestrians are employees of City of London businesses, while the majority of motorists are professionals servicing employers in some way.

Promotion will be through a series of high profile public-facing events, business conferences, rides and walks through the City, advertising, road user forums and business and stakeholder groups. It will also be promoted through existing events such as the Concours d'Elegance, the Lord Mayor's Show and Ride London. Changing behaviour is a long-term process, and attitudes to the travel programme will run for a number of years. Continual monitoring will provide lessons, which will be applied to hone the effectiveness of the messages and delivery.

Events in the Public Realm - Re-Envisioning the Streets

High profile events held in the public realm, which usually include streets closed to traffic but open to active travellers, form an essential component of a behaviour change campaign.

The objective of events is to allow the community to envision a public space focussed on people rather than traffic. In a busy place like the City, where pavements are often crowded, a space allocate to people naturally fills up, and linking to a broader agenda can kick-start a campaign. Public events help show that streets are not just for traffic, but also great places for people to meet and chat, helping to promote active modes of travel, generate positive publicity for the City of London and allow consultations on big issues such as the safety of pedestrians.

Cities around the world have used similar events to engage their communities towards transforming their streets to be safer and more welcoming for active travellers.

- Summer Streets: – New York – Started by Mayor Bloomberg in 2008, this event continues to attract mainstream sponsorship and huge crowds to enjoy Central New York without motor traffic.

New York. Source: https://www.nyc-arts.org/events

- Ciclovia: – Bogotá, Colombia – The capital city is transformed each Sunday with 120km of streets only for bicycles, skate-boarders, yoga and dance. The event attracts 2,000,000 residents each week. The concept is now in place in dozens of cities around the world.

Cicolvia, Bogota. Source: https://commons.wikimedia.org/

- Paris Breathes: – First Sunday of each month, nine areas in Paris are set aside for active travel, including the Champs Elysees.

Paris Respire

It is proposed that public events are arranged at least once a year in the City, existing events like Ride London, are entirely focussed on cycling, and therefore not ideal for the City where our focus is room for an ever-increasing number of pedestrians.

2. Causational factors programme

Figure 10. High numbers of pedestrians means riders and drivers need to be ready to stop.

The City of London Police officers are one of the first responders to collisions that cause injury in the Square Mile. They report a number of factors that may have contributed to the collision. The statistics gathered from these roadside reports relating to personal injury accidents on public roads are recorded using the STATS19 accident reporting form.

These roadside reports include details such as make and model of vehicles or pedestrian involvement, level of injury sustained, time of day, weather conditions and behavioural causational factors that the attending officer concludes are related to the collision.

These behavioural factors are then analysed by the Road Danger Reduction Team at the City of London Corporation in partnership with the City of London Police to identify trends, locations and road conditions, to inform a Causal Factor intervention programme.

Targeted campaigns will be developed at specific locations. Road Safety audits will be carried out to recommend engineering improvements to the highway to reduce danger.

The data shows that 45% of injury collisions occur on the TRLN, of which 16.5% are on the A10. This programme will support the development of a road safety engineering programme with TfL, with supporting behaviour change campaigns to address this toll.

Common behavioural collision factors are:

- Failed to look properly;
- Careless/Reckless or in a hurry;
- Crossing between stationary vehicles;
- Failed to judge another vehicle's speed;
- Pedestrian impaired by alcohol;
- Pedestrian inattention;
- Passenger opening a door in front of a cyclist;
- Right turn across a cyclist's path;
- Left turn across a cyclist's path.

By carefully analysing collision data, a combination of behaviour change and engineering interventions can target the causational factors that lead to collisions at the specific locations where they occur.

Campaigns can support this process through targeting the road users most frequently in collisions to warn them about dangerous behaviours.

We will continue to work with the City of London Police to develop a strong understanding of the causes and consequences of collisions in the City of London. This means understanding who is hurting whom, which modes are in conflict with which and where, and identifying ways of addressing particular dangerous behaviours.

The City of London Police will remain a key partner in this work alongside the City of London Corporation's educational campaigns, with targeted enforcement on the causational factors in areas where common collision types occur.

A recent collision analysis report can be seen as an appendix to this report.

3. Stakeholder Engagement - Active City Network (ACN)

Figure 11. Changing our urban context requires shared knowledge of behaviours and the built environment.

The ACN is an engagement tool for communicating with businesses, residents, visitors and students, to plan and deliver road danger reduction and active travel promotional activities, such as those outlined above.

The objective is to have the City of London communities work with the Road Danger Reduction partners, to produce a sense of common ownership of the issues of danger and injury to active travellers.

It is now common knowledge that physical activity gained through everyday walking and cycling has many benefits to health and well-being, and there are many smart phone apps measuring steps and ride distances.

There is an estimated 452,000 employees now working in the City of London, and over 85% of commuters travel by active modes, walking or cycling the last mile to their workplace. It is also during the morning and evening peaks when the majority of collisions occur, with a smaller spike at lunchtime, when the predominant mode is walking.

Employers also generate the majority of traffic. Taxis, motor and pedal cycle couriers, vans making deliveries, and servicing vehicles are also involved in the collisions with active travellers who work in the buildings. Working with the supply chains of the employers, we will promote good driver behaviour as set out in the Etiquette guide above.

Large employers with the scale to employ a health and safety manager, generally understand the costs of losing a member of staff through even a slight injury, if they are off work for a number of days or weeks as a consequence, and therefore share the Corporation's aim to keep them safe.

Smaller employers may not have the time to consider the issues, but would be disproportionally affected should a key member of staff be lost for an extended period. Therefore, we offer smaller employers a range of free services such as cycle training for staff, cycle repair workshops, and promotion of City walking routes.
The Active City Network is being developed to provide services such as cycle training and cycle repair workshops to staff, and as a platform to communicate key messages to all employees to help avoid injury.

It will provide a forum for feedback on proposals to cater in particularly for the growth of the City's pedestrian community.

The Network is currently managed as with a board chaired by Alderman Alison Gowman.

Activities will include:

- Business Conferences;
- Major public events – such as 200th anniversary of the bicycle;
- Road Shows – in the workplace and outside;
- Best Practice Publications;
- Videos and materials for employee induction packs;
- Newsletters;
- Consultation on changes to deliveries;
- A members forum;
- Other activities as agreed by the board.

4. Better Coordination of Enforcement, Education and Engineering

Road Danger Reduction Partnership

All parties have an important role in helping to achieve Vision Zero. Since 45% of KSI collisions in the City of London occur on the TRLN, it is essential that we work closely with the GLA and TfL who manage these streets, to develop solutions. In an environment of cost savings and efficiencies, bringing together key stakeholders to plan, coordinate and collaborate efforts is vital.

The established Road Danger Reduction Partnership of the City of London Police, London Fire Brigade (LFB), TfL, GLA and City Corporation is dedicated to making a healthier and safer City.

Senior officer meetings will review the RDR Work Programme and set targets for the year ahead. To award the gravitas this subject deserves and to engage at a higher level at the GLA and TfL, these meetings will be chaired by the Chairman of Planning and Transportation. This will also help engage at a senior level at TfL and the GLA to collaborate on proposals to address road danger on the City of London sections of the TRLN.

At policy level, the Road Danger Reduction Partnership of senior officers includes the Director of City Transportation and Public Realm, the Chief Superintendent of the City of London Police and other officers as appropriate. The key partners are the City Corporation, City of London Police and the LFB. Senior representatives of the GLA and TfL will be invited to attend when the agenda concerns the TRLN.

The Partnership will meet twice a year to sign off the annual Road Danger Reduction and Active Travel Report, which outlines to members what is being done in the area of road danger reduction, setting targets and projects for the year ahead. A second meeting will be arranged mid-year as an opportunity to discuss what each party is doing and how effective it is being.

At officer level, an established Operational Delivery Group (ODG) provides a platform to share information and coordinate projects. This group will continue to meet quarterly.

We will also look to invite officers from neighbouring Boroughs, which face similar challenges over large numbers of pedestrians and cyclists and high commuter flows, so that we can better coordinate programmes, and work together on cross-boundary issues. Officers from TfL will continue to be invited as the highway authority for the TRLN.

THEME TWO: Deliver Healthy Streets, Vision Zero and Road Danger Reduction Objectives

Road danger reduction and vision zero: understanding and monitoring

We will continue to monitor collision statistics, seeking to understand patterns, causes and who is continuing to hurt whom.

We will continue to deliver Road Safety Audits, and Highways monitoring reports investigating possible engineering solutions to road danger.

All the research will be shared with our partners in the RDR Partnership, including the police to support targeted enforcement.

5. Targeted Enforcement and Collision Analysis

Targeted enforcement and Collision Analysis:

The City Corporation Road Danger Reduction team works in close partnership with the City of London Police and TfL to gather and analyse the data from all injury collisions. This provides the input to an 'intelligence led' intervention approach. Through this strategy we will extend the Highways Monitoring programme to look at not only the road traffic collision hotspots but also pedestrian crossing facilities, cycle facilities and those for powered two wheelers to propose improvements that would aid safety. We will support City of London Police with civil enforcement measures and will seek to establish a special services agreement, which will include road policing activities if funding allows.

The City of London Police has a Roads Policing strategy which:

- Ensures that higher risk road user behaviour and criminality on the roads is addressed through criminal prosecution or educational alternatives;
- Uses intelligence products to support tasking of police officers on criminal enforcement activities based on threat, harm and risk;
- Supports activities that aim to address the root cause of serious injury and fatal collisions, focus on higher risk and vulnerable road users and target criminality and offending on our roads;
- Supports road safety campaigns and events delivered by the City of London Corporation and Transport for London.

We will use civil enforcement measures to support the City of London Police work.

For the period of this strategy, officers from the Transport and Highways Operations Group will be joining forces with Project Servator teams to carry out unpredictable deployments in the City of London. Project Servator employs the latest in behavioural science to help disrupt hostile reconnaissance and wider criminality; these deployments are likely to increase the volume and range of road traffic offences detected through bringing together highly trained teams of Disruptive Effects Officers and Roads Policing specialists.

Motorists that show intimidating or erratic behaviours are often also found to be breaking other laws, so Project Servator will have an impact on Road Danger Reduction and reduction of other criminality.

The presence of uniformed police officers on the streets helps to encourage good road user behaviour, whilst unpredictability of locations and involvement of plain clothes officers will help to encourage good road user behaviour throughout the Square Mile.

6. Safer Freight Operation

Figure 12. Recognising and celebrating professional excellence and attentiveness towards vulnerable road users.

Heavy Goods Vehicles are essential for the construction sector to deliver large items and take away refuse. The largest category of vehicle, at over 7.5 tonnes, makes up less than 1% of the traffic but have been involved in 30% of the road fatalities in the City over the past five years.

The road danger issue is that the current fleet of lorries generally used in construction projects have been designed with clearances to go off-road on quarries and building sites. This leaves blind spots for the drivers directly in front of the drivers' cab and on either side, which is the primary cause for a number of deaths to cyclists and pedestrians in the City and across London. To mitigate this, TfL launched FORS (the Fleet Operators Recognition Scheme) for freight operation companies to ensure that their drivers were trained to drive in urban areas and that the lorries are fitted with the latest safety equipment.

The Safer Urban Driver Training (SUD) programme involves half a day in the classroom and half a day on a bicycle. The City of London Corporation hosts a number of these courses each year. The safety equipment includes mirrors to enable drivers to see the blind spots, sideguards and warning signals. Construction contractors sign up to Construction Logistics and Community Safety Scheme (CLOCS) to ensure that their supply chain adhere to FORS standards, and that they follow routes to and from sites that are as safe as possible.

The City of London Corporation is one of the leading authorities in promoting these standards. Through the recently launched City Mark scheme, we worked with half of our active major construction sites to advise on and audit compliance measures in place, and awarded a Considerate Contractor Scheme award to: the best principal contractor, best construction logistics plan, best driver, best banksman and best freight operator. All sites that showed compliance to FORS and CLOCS standards were awarded a City Mark Road Safety sign.

Through the period of this strategy, we will work with the City of London Corporation's Highways team to extend the City Mark scheme to all construction sites, supporting those that need help with compliance procedures and put in place monitoring procedures. In 2017 we included FORS as a requirement for the City Corporation's own suppliers. We will support these suppliers to implement FORS through the provision of training workshops.

Smaller goods vehicles are disproportionally involved in collisions which cause injury. We will work through the Active City Network to encourage City of London businesses to promote safer driving standards and training, and follow the City of London Corporation in requiring FORS compliance.

We will also work with businesses to research opportunities for cargo bike deliveries for smaller items to remove some vans from the road.

The recently developed Direct Vision Standard lorries remove blind spots. Trials show that the drivers' reaction time is significantly improved by this new design. Throughout the period of this strategy we will promote this new design of lorry and encourage Fleet Operators servicing sites in the City of London to use this type of lorry.

We will work with fleet operators to encourage the adoption of the latest technologies that assist vehicle safety, such as autonomous braking and intelligent speed assistance.

7. Safer Riders

Figure 13. Speed and the ability to slide through traffic also increase the chances of an accident.

Safer Powered Two Wheelers (P2W)

Motorcycles and scooters (powered two wheelers) are a major area of concern since they are involved in 25% of all KSIs in the City of London. The majority of injuries are to powered two wheelers (P2W) riders, usually in conflict with other motor vehicles, but P2Ws are also involved in collisions with pedestrians. On average, 3.2 pedestrians and 1.2 cyclists are seriously injured when in collision with a powered two wheeler. Throughout the period of this strategy, we will work with the representative groups for powered two wheeler riders, to research potential mitigation interventions.

The most common collision is when a pedestrian steps out between stationary vehicles into their path. The 'Be Brake Ready' campaign will focus on this collision type.

We will target behaviour change campaigns at both commuter and professional riders and offer training at free or reduced costs to all.

Delivery companies employ powered two wheelers to deliver small items, and in the case of fast food delivery often employ relatively inexperienced riders on 50 – 125cc bikes. To ride this type of vehicle currently requires only one day of training if they carry L-plates. We will work to promote better training for all delivery riders through the new TfL network.

We will work with established industry and user associations and groups, such as the MCIA to a to engage with riders in the Square Mile. We will use these connections to the rider community to better understand the issues and research opportunities to make riding safer. We will also promote P2W training, maintenance of bikes, and issue advice on safer riding.

Safer Cyclists

We will work to encourage good safe cycling, while discourage aggressive anti-social cycling in the City of London.

Cycling in the City of London has grown in popularity and in 2016 pedal cyclists represented almost 26% of vehicles. The safety for cyclists has improved, but in 2016 13 cyclists were seriously injured, so there is still more work to be done.

To encourage safer cycling and safer bicycles will continue to work through the Active City Network to encourage the take-up of cycle training and provide cycle repair workshops.
The level of cycle and goods vehicle conflict is very high, and has led to 22 fatalities or serious injury in the period 2011 - 2016. More work to raise awareness with riders of blind spots and promote Safer Urban Driver training for goods vehicle drivers.

As the popularity of cycling grows, there has also been an increase in numbers of cyclists involved in collisions with pedestrians. Surveys and focus groups show that the City of London population considers the behaviour of cyclists to be the most concerning of all.

The data shows that cyclist and pedestrian conflict led to 22 serious injury collisions in the period of 2011 - 2016. While pedestrian inattention is the most common causational factor, with such large numbers of pedestrians at peak times, we will promote the need for cyclists aware of a high risk of collision with pedestrians.

The City Etiquette campaign will target cyclists, asking them to look out for pedestrians and ride in a manner where they are ready to stop.

A common collision is pedal cyclists filtering through stationary or slow moving motor traffic colliding with pedestrians who step off the footway. We will promote a slow down and look campaign targeting both pedal and motor cyclists, as well as pedestrians to raise awareness of the issue.

Breaking the law, jumping red lights and riding on the pavement, not only creates a hazard, but also increases the negative perception of cyclists by other road users. We will work with the City of London Police to reduce the incidence of this illegal behaviour.

We will work with established cycling groups such as the Bicycle Association and London Cycling Campaign, to engage with pedal cyclists to better understand the issues and research opportunities to make cycling safer in the City of London.

8. Safer drivers

Figure 14. The shift towards healthy streets provides long-term benefits to the quality of our life.

Safer Buses

The Mayor's Transport draft Strategy has a particular focus on the safety of buses, with the following targets:

- 2022 – reduce the number of people who are killed or seriously injured in, or by, London buses by 70% against 2005-09 levels;
- 2030 – reduce the number of people killed in, or by, London buses to zero.

In the Square Mile there is an annual average of 12.4 injuries to pedestrians and 7.6 to cyclists, of which 2.8 and 1.6 are serious or fatal (2011 – 2015) involving buses or coaches. Of the injuries to pedestrians, the majority of injuries are to passengers falling over while the bus brakes or swerves suddenly.

Working with bus operators, we have organised focus groups to understand the perspective of bus drivers. They tell us that in most instances it is due to pedestrians stepping out in front of them, or the erratic behaviour of some cyclists, that leads them to brake or swerve.

In order to reduce the incidence of pedestrians falling over, we propose a behaviour change campaign to put adverts in buses to encourage all people to 'please hold on' while asking bus drivers to also remind passengers. We will also work through the Road Danger Reduction Partnership and TfL to encourage enhanced driver training for bus and coach drivers to look out for cyclists when pulling in or out of bus stops.

Safer Taxis

We see, on average, 24 injuries to motorcyclists or cyclists who are 'doored' by passengers opening doors in front of them. We will look to advertise the 'Dutch Reach' approach, using the far hand when opening doors, which makes looking behind natural. We will reinforce the message through collaboration with the taxi driver groups and articles in taxi driver magazines.

Collision data shows that taxis collide with powered two wheelers (P2W) much less frequently than with pedal cyclists, when compared with cars. Taxi drivers spend years doing the Knowledge on P2Ws, and thus we will lobby TfL as the licensing authority for cycle training to become a mandatory part of the Knowledge.

Safer Cars

Almost 30% of vulnerable road users are injured in conflict with cars (2011 – 2015), which is the highest percentage of any vehicle type. Due to the difficulties with traffic counts, a significant proportion of cars in the Square Mile are possibly private hire vehicles (PHV). To support better targeting of behaviour change, we will seek to work with the City of London Police to correctly classify all injuries caused in conflict with a taxi or private hire, as currently private hire are grouped as taxi/PHV or incorrectly classified as a car.

In terms of interventions with private hire vehicles, we will follow a similar approach to that with Hackney carriage taxis. We will lobby TfL to propose safer urban driver training for private hire drivers where they are required to spend at least one full day cycling and learning about the potential hazards such as pedestrians stepping out suddenly.

Dooring is also a problem for private hire passengers and we will work with the major organisations Addison Lee, Green Tomato and Uber to put up Dutch Reach posters in their cars and train their drivers.

We will also work through the Active City Network to encourage better driving for those who drive to work in the Square Mile, highlighting the 'Be Brake Ready' campaigns to watch out for pedestrians and cyclists and encourage drivers to take free cycle training offered by the City to all City workers.

Traffic that drives through the City on the way to elsewhere has no benefit to the economy of the Square Mile, causing pollution and danger to vulnerable road users and should therefore be discouraged. Traffic reduction would have a significant benefit to reduced collisions as well as congestion. These themes will be covered in the Transport Strategy.

THEME THREE:
Active Travel & Healthy Streets - Innovative Approaches

Active travel means healthy streets. If people are more active they are less likely to suffer heart disease, cancer, type-2 diabetes, stroke, depression and dementia. The long-term care and social implications of these diseases are significant and growing, with most adults not taking sufficient exercise to benefit their health. The combination of danger reduction and interventions to encourage and facilitate active travel are central to the delivery of this strategy.

We need to make space for the increase in demand for active travel spaces following the opening of Crossrail in 2019 and Underground/National Rail capacity enhancements. Space Syntax reveals where the pedestrian demand hotspots and routes will be, and work by SDG [9] has identified key target locations to address particular types and causes of collisions.

Temporary pilot schemes where we experiment at relatively low budget and study both the positive and negative impacts would provide evidence and experience for future permanent major works.

The approach is based on the programme applied in New York under the Bloomberg administration where Transport Commissioner Janette Sadik-Khan used temporary materials like paint, planters, chairs and tables to make places more people friendly and promised to take them out if they didn't work.

The City of London will adopt two broad themes under the experimental scheme trails, timed closures and active travel zones.

9. Timed closures

Figure 15. Addressing congestion at junctions

[9] SDG 2017 City Etiquette

Prohibiting all motor traffic except buses at Bank Junction under a temporary traffic order has demonstrated that the closure of a high profile junction can be delivered on a temporary basis to study the impacts.

During the period of this strategy we will research opportunities for timed closures to certain classes of traffic. We will look at the areas with the highest density of active travellers, in particular those locations which are already road collision hotspots.

All proposals will include a significant element of stakeholder engagement, with support from the Active City Network. We will research potential negative and positive impacts in advance of any trial and be ready to remove trial measures at short notice if they are proving either ineffective or due to public or stakeholder demands.

Initiatives may include:

- Trialling of freight deliveries shifted out of peak times;
- Lane closures on multi-lane roads at night – e.g. Mansell Street (2017 pedestrian fatality on three lane road)
- Part-day filtering of certain vehicle types on key walking routes at peak times
- Monitoring of road closures created by programmed maintenance and building works

10. Active Travel Priority Zones – Tactical Urbanism

Closing streets to traffic on temporary basis and creating active travel priority zones is a common approach to both promote the importance of the public realm. In many cities around the world key streets are closed to traffic every Sunday.

We will look to explore activities that envision the City of London without motor traffic for a day, to promote the benefits of active travel to the environment, and also research the opportunity for longer trials lasting up to six months.

We will look to use materials such as paint and planters to change the language of a street. While traffic will not be physically limited, the feel of the street will encourage walking and cycling priority zones, where motor traffic is encouraged to give way, and travel at a lower speed.

Through experimental schemes, we can reallocate space to pedestrians on an experimental or permanent basis, introducing painted surfaces, planters, seating and other features at low cost. If the scheme is popular and it works it could be made permanent. If not, it can be removed.

Active Travel Priority Zones, where the recommended speed for vehicles would be no greater than 10mph, will be investigated, and if deemed possible trialled and monitored.

Figure 16. *Times Square, New York. Before and after.*

The urban intervention was a success, leading to dramatic increases in foot traffic, revenues to local stores and a decrease in traffic related injuries.

Another purpose of the intervention was to make New Yorkers feel included, as many of them felt Times Square was a place for tourists.

11. Lunchtime Streets and Sunday City Streets

Lunch-time streets

Up to 30% of injuries to vulnerable road users take place at lunch time, which is one of three pedestrian activity peaks (Fig. 17). We propose to close a street in the Square Mile on a trial basis during the summer of 2018/19 to investigate the impacts and report on the potential for wider implementation in the following years.

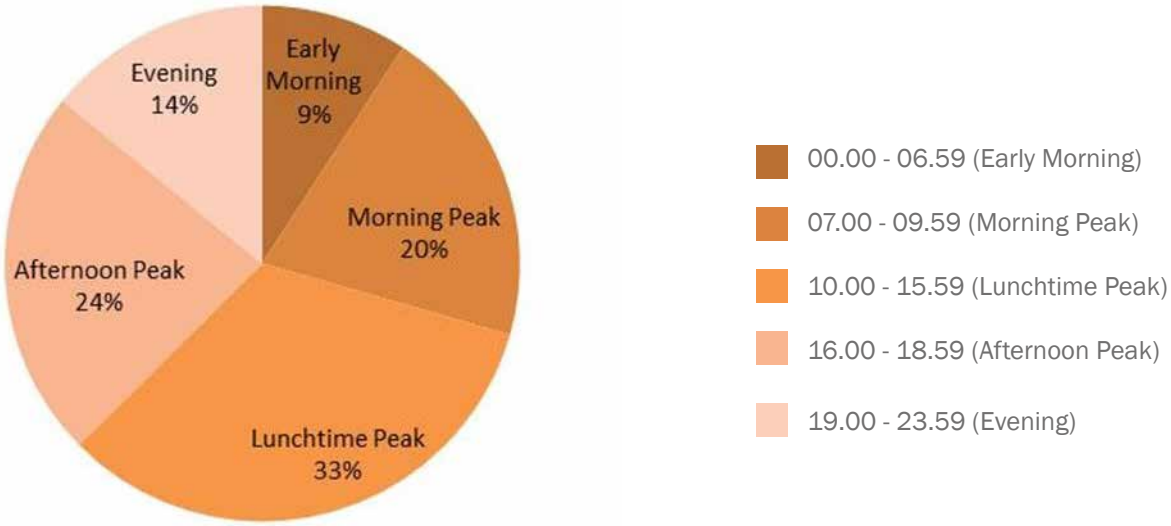

Figure 17. City of London - Collisions 2014 - 2016

Conclusion

This strategy is about people. It sets out a path to engage with all stakeholders to deliver behaviour change, engagement, partnership, road danger reduction and active travel in an exciting and engaging way.

As the central business district for the capital city, what we do as the City of London has influence nationwide. People look to us to lead by example and demonstrate progress. The entire UK economy is reliant on our investment in the City as a campus for companies that want to locate here because they can attract and retain the very best talent. The ability to move safely is therefore a priority.

At the same time, the City has an immense portfolio of heritage and architectural interest that will attract weekend and evening visitors. The success of the Culture Mile being established around the Barbican, where creativity is the most valuable currency, will depend on visitors arriving on foot, cycle and public transport. It is therefore imperative that we base our strategy on the goal of enabling people to walk and cycle safely to their points of arrival.

Coordination with other initiatives such as the Culture Mile will be essential to reduce danger to our active travellers.

If we want to reduce danger and deliver Vision Zero we need to work in partnership:

- All stakeholders will be asked to consider and work towards Vision Zero as our ultimate goal by 2041;
- Vision Zero and Road Danger Reduction will permeate all of our transport-related activities;
- We seek to change attitudes and awareness in a non-confrontational way - backed by enforcement;
- We will create a new language for our streets which welcomes people;
- With successful partnerships we can work with neighbouring boroughs and Westminster to realise Vision Zero in central London.

We need to do this together!

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steer davies gleave

Road Danger Reduction – City Etiquette Guide

Analysis of KSI collisions

City of London Corporation

September 2017

Executive Summary

The analysis has been undertaken using data obtained from TfL for a 5-year period, between 1st January 2012 and 31st December 2016.

Maps and charts have been developed looking at collisions resulting in fatalities or serious injuries (KSI – killed or seriously injured). The dataset includes 261 of these occurrences (11 fatal and 250 serious).

Yearly Trends

- The yearly number of KSI collisions is slowly decreasing: from 58 in 2012 to 50 in 2016, with a significant low in 2015 (42 KSI collisions)
- On the other hand, the number of collisions involving pedestrians has been growing (from 20 in 2012 to 29 in 2016). During the last year, half of all KSI collisions involved pedestrians.
- Collisions involving cyclists are decreasing in line with the total number of occurrences.

Hotspots

- Almost half of all KSI collisions in the City of London occur on the TLRN network
- The junctions showing the highest concentration of KSI collisions are: Bank junction; King William Street with Cannon Street (Monument Station); Ludgate Circus (City Thameslink Station); Farringdon Street with West Smithfield

Vulnerable Users

- Pedestrians and cyclists are the most affected modes. The two categories are involved in approximately the same share of KSI collisions (42.2% involved pedestrians, 42.5% involved cyclists) – but cyclists counted the highest number of fatalities (6 in the last 5 years, vs 4 pedestrians).
- Hotspots for collisions involving pedestrians are Bank junction, Farringdon St/Fleet St, Bishopsgate, Moorgate and Fenchurch St.
- Hotspots for collisions involving cyclists are in proximity of interchange areas, possibly due to highest kerbside 'friction' (pedestrians, taxis, etc.): Bank junction, Monument junction and Ludgate Circus (City Thameslink).

Other modes

- Goods vehicles are the mode which most frequently involved in KSI conflicts with cycles and pedestrians (44 collisions involving goods vehicle and vulnerable users, 17% of the total).
- Taxis are involved in a limited number of collisions (15%) if compared to the number of collisions involving other cars (25%). According to DfT guidance, the category 'Taxi' should include privately hired vehicles.

Impact of congestion

- Traffic levels have a clear impact on collisions involving 2 wheelers: 45% of collisions involving pedestrians and motorcycles, and 29% of collisions involving pedestrians and cyclists occur in presence of stationary traffic (pedestrians crossing masked by stationary vehicles)

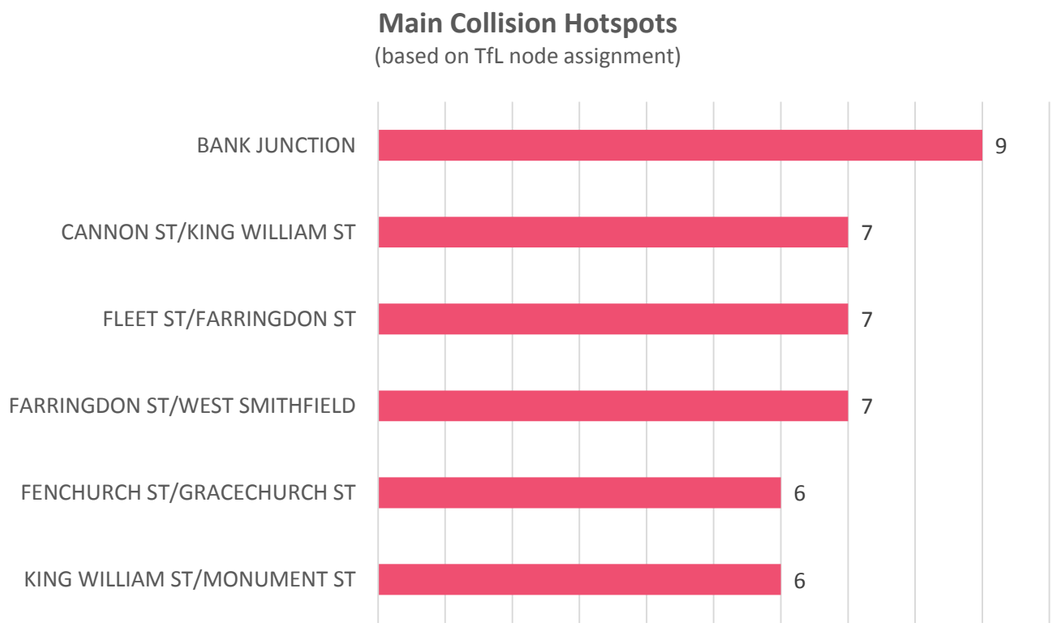
Impact of CS3 (East-West) and CS6 (North-South)

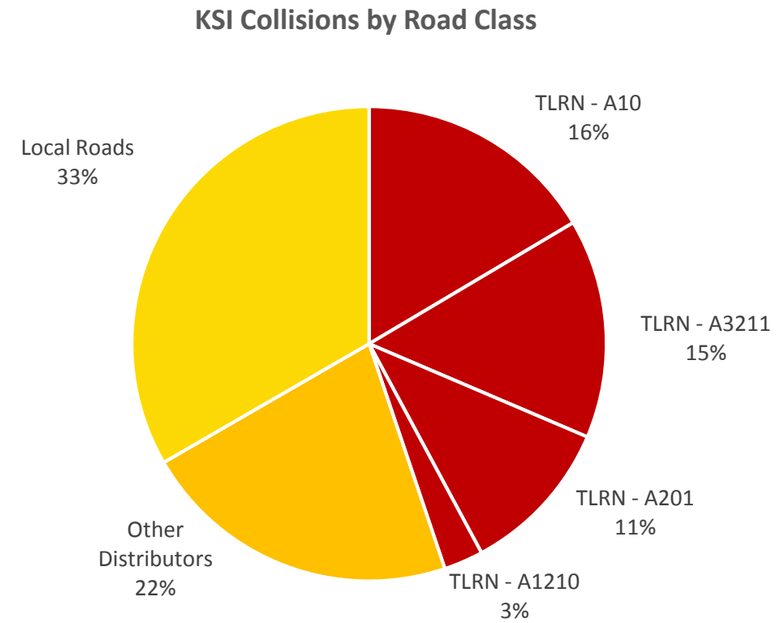
- It is too early to measure the impact of the opening of North-South and East-West Cycle Superhighways (April-May 2016) but a few provisional considerations can be made.
- Whilst the overall number of collisions involving cyclists has decreased from 2015 to 2016, the number of collisions occurring along the two routes had an increase (the increase regarded slight collisions only, and not KSIs)
- This can partly relate to the large increase in cycle flows along these links (+30% over the last year 5 years, according to screen line surveys).

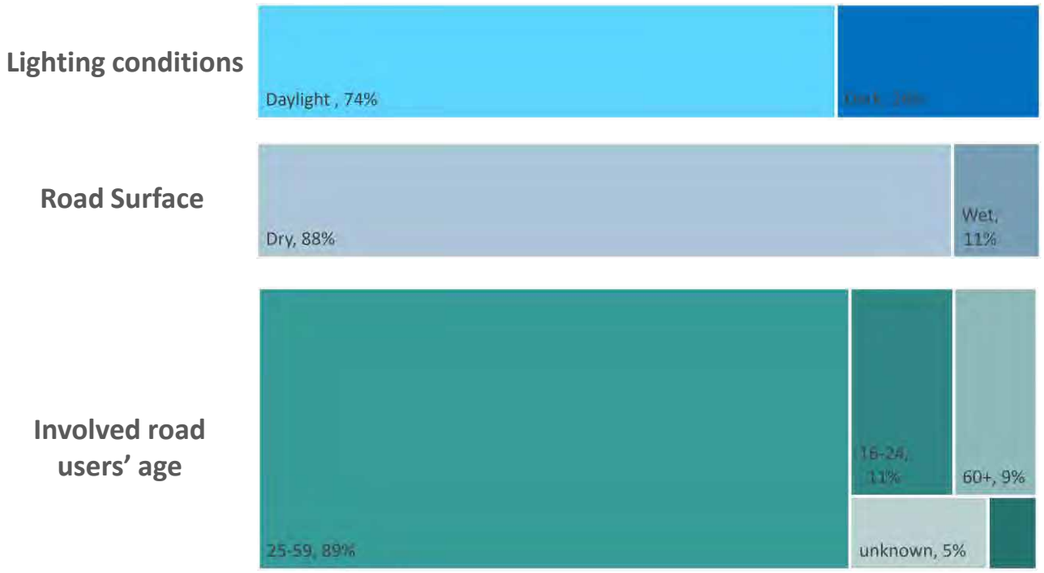
General Overview

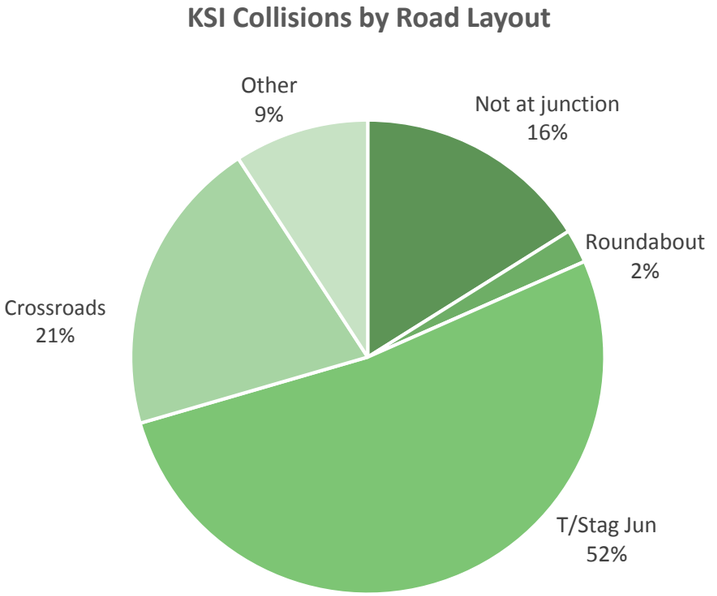
Killed/Seriously Injured (KSI) collisions – General Statistics

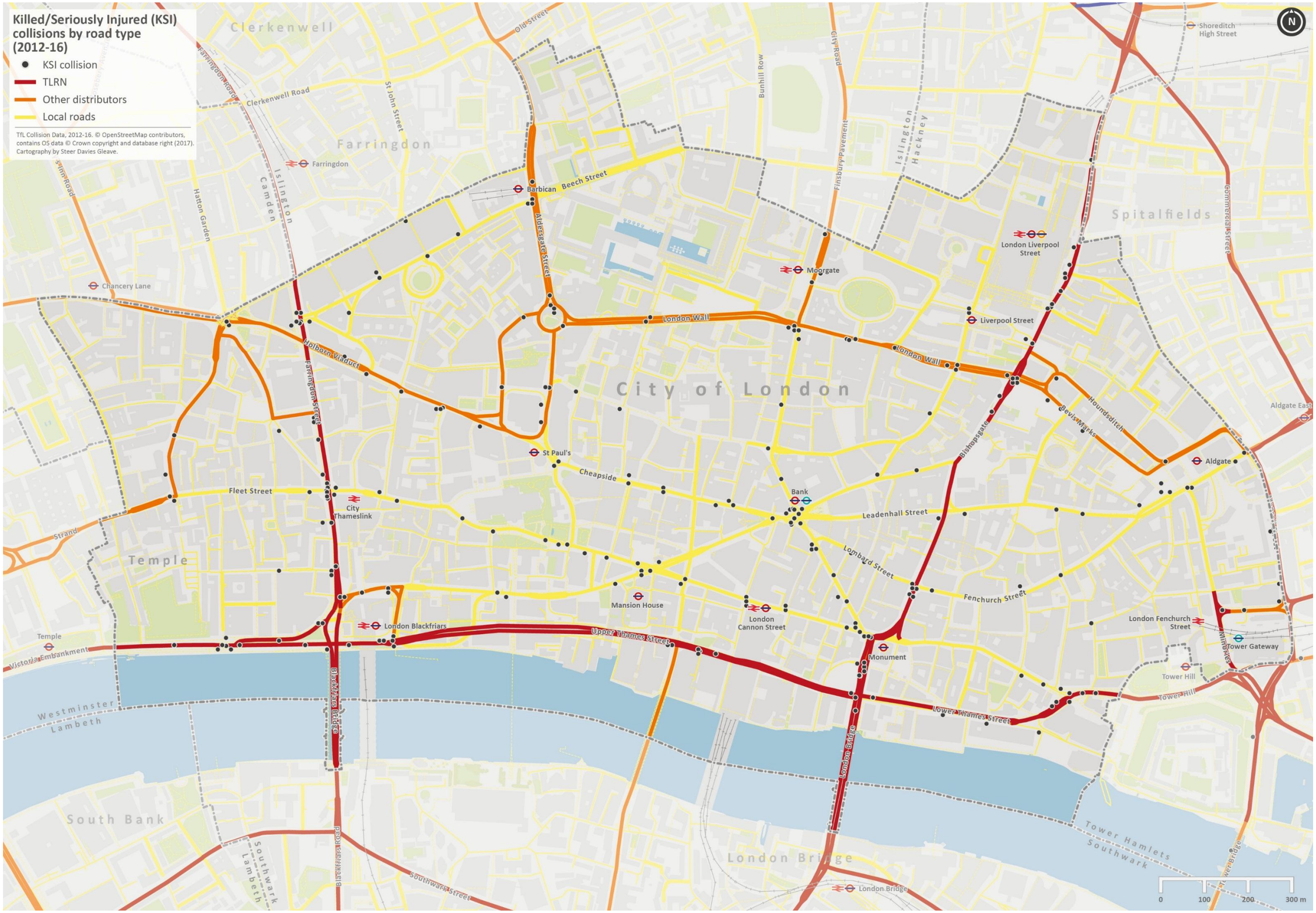
Based on TfL Personal Injury Collision Data 2012-2016 (provisional)
261 KSI collisions recorded - 11 of which fatal, 250 resulting in serious injuries



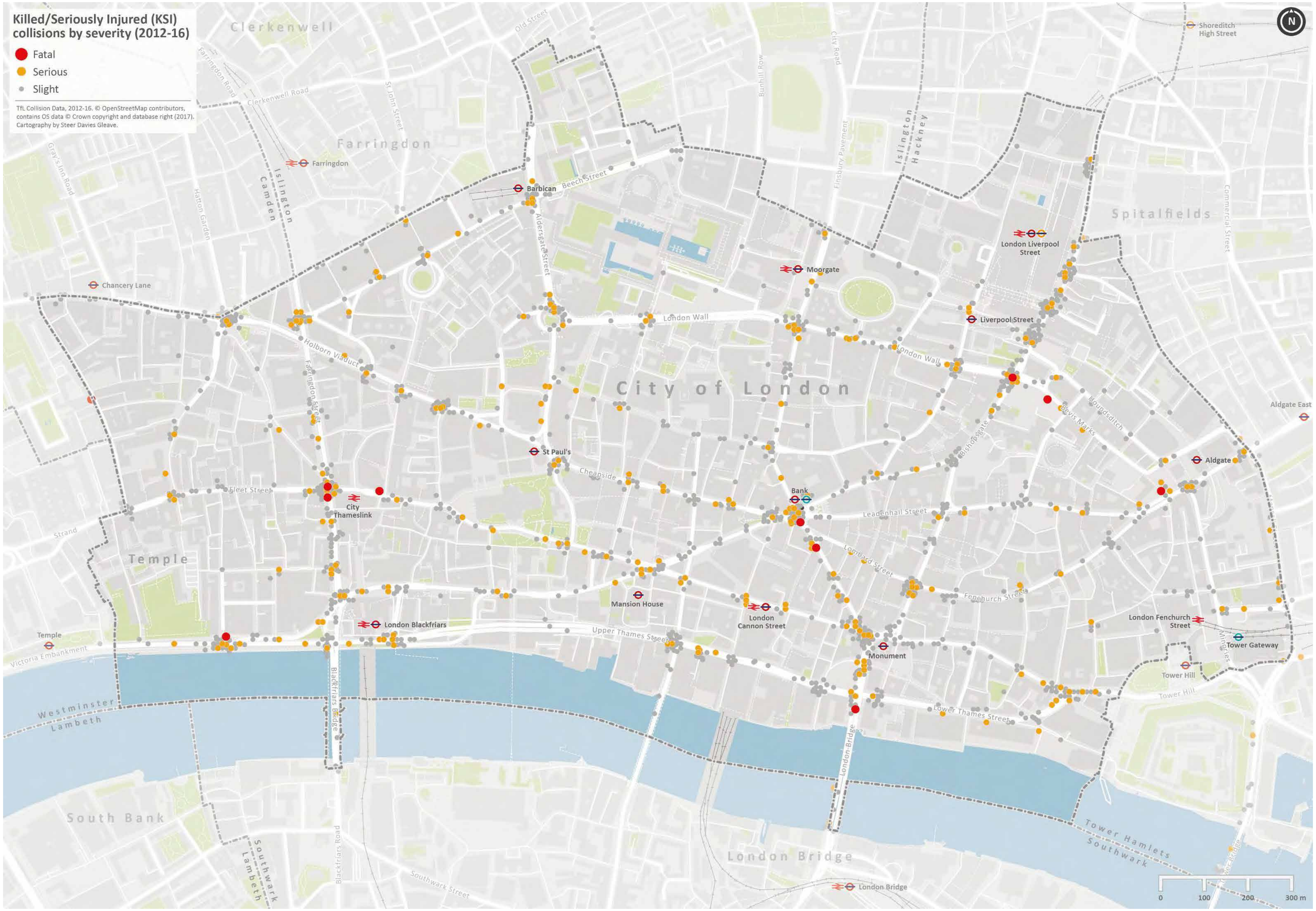


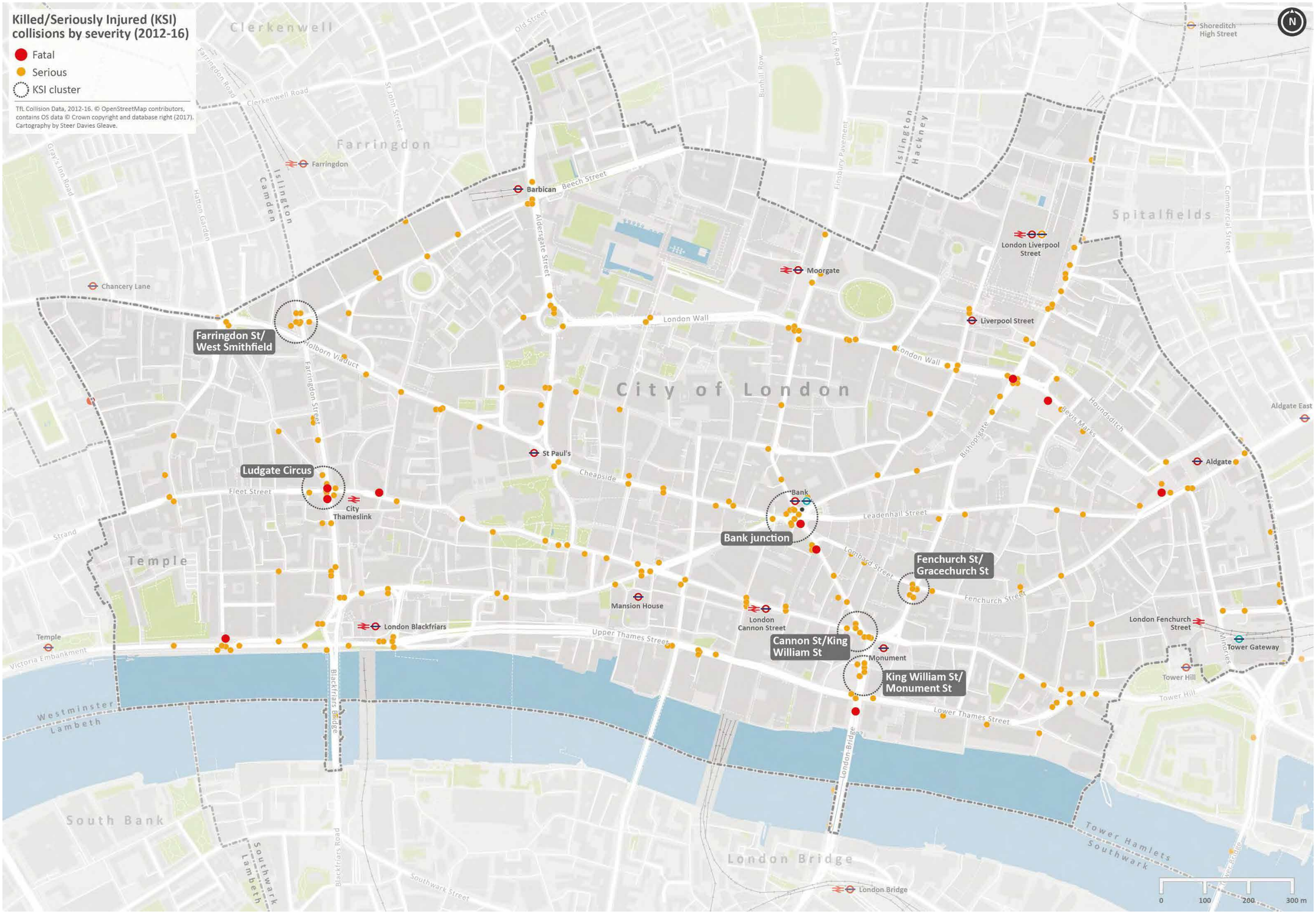


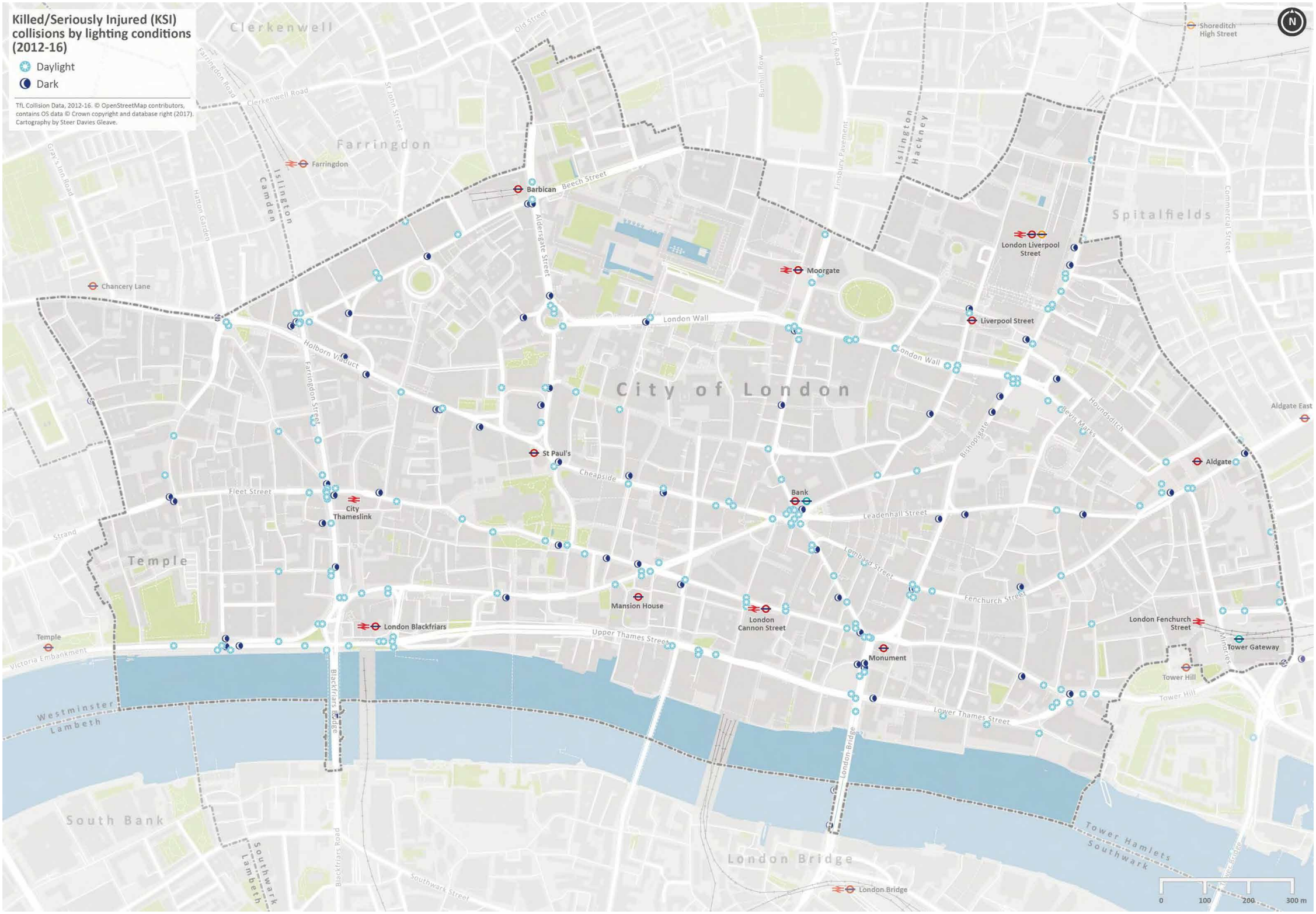



Killed/Seriously Injured (KSI) collisions by road type (2012-16)
KSI collision
TLRN
Other distributors
Local roads
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
Clerkenwell
Farringdon
City of London
Temple
South Bank
Spitalfields
London Bridge
Old Street
Clerkenwell Road
St John Street
Farringdon Road
Farringdon
Barbican
Beech Street
Aldersgate Street
Bunhill Row
City Road
Finsbury Pavement
Islington
Hackney
Shoreditch High Street
Commercial Street
London Liverpool Street
Liverpool Street
Moorgate
London Wall
Chancery Lane
Holborn Viaduct
Farringdon Street
Hatton Garden
Islington
Camden
St Paul's
Cheapside
Bank
Leadenhall Street
Lombard Street
Fenchurch Street
Bishopsgate
Bevis Marks
Houndsditch
Aldgate
Aldgate East
Fleet Street
City Thameslink
Strand
Temple
Victoria Embankment
Mansion House
London Cannon Street
London Blackfriars
Upper Thames Street
Lower Thames Street
Monument
London Fenchurch Street
Tower Gateway
Tower Hill
Minories
Blackfriars Bridge
London Bridge
Southwark Street
Blackfriars Road
Southwark
Lambeth
Westminster
Tower Hamlets
0
100
200
300 m

Page 59


Killed/Seriously Injured (KSI) collisions by severity (2012-16)
Fatal
Serious
Slight
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
Clerkenwell
Farringdon
Farringdon
Barbican
Beech Street
Chancery Lane
Moorgate
London Liverpool Street
Liverpool Street
Spitalfields
Shoreditch High Street
London Wall
City of London
St Paul's
Cheapside
Fleet Street
City Thameslink
Holborn Viaduct
Aldgate
Aldgate East
Bank
Leadenhall Street
Lombard Street
Fenchurch Street
Temple
Strand
Mansion House
London Cannon Street
London Blackfriars
Upper Thames Street
Victoria Embankment
Monument
London Fenchurch Street
Tower Gateway
Tower Hill
Lower Thames Street
Westminster
Lambeth
South Bank
London Bridge
Tower Hamlets
Southwark
0
100
200
300 m


Killed/Seriously Injured (KSI) collisions by severity (2012-16)
Fatal
Serious
KSI cluster
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
Farringdon St/ West Smithfield
Ludgate Circus
Bank junction
Cannon St/King William St
Fenchurch St/ Gracechurch St
King William St/ Monument St
Clerkenwell
Farringdon
Barbican
Moorgate
Liverpool Street
London Liverpool Street
Shoreditch High Street
Spitalfields
Aldgate East
Aldgate
Chancery Lane
St Paul's
City Thameslink
Bank
Mansion House
London Cannon Street
Monument
London Fenchurch Street
Tower Gateway
Tower Hill
London Blackfriars
Temple
London Bridge
City of London
Temple
South Bank
Westminster
Lambeth
Southwark
Tower Hamlets
Old Street
Clerkenwell Road
Farringdon Road
St John Street
Beech Street
Aldersgate Street
London Wall
Holborn Viaduct
Farringdon Street
Cheapside
Leadenhall Street
Lombard Street
Fenchurch Street
Upper Thames Street
Lower Thames Street
Blackfriars Bridge
Blackfriars Road
Southwark Street
London Bridge
Fleet Street
Strand
Victoria Embankment
Gray's Inn Road
Hatton Garden
Islington
Camden
Bunhill Row
City Road
Finsbury Pavement
Islington
Hackney
Commercial Street
Bishopsgate
Houndsditch
Bevis Marks
Minories
0
100
200
300 m


Killed/Seriously Injured (KSI) collisions by lighting conditions (2012-16)
Daylight
Dark
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
Clerkenwell
Farringdon
Spitalfields
City of London
Temple
South Bank
London Bridge
Lambeth
Westminster
Southwark
Tower Hamlets
Old Street
Clerkenwell Road
Farringdon Road
St John Street
Bunhill Row
City Road
Finsbury Pavement
Islington
Hackney
Commercial Street
Gray's Inn Road
Hatton Garden
Islington
Camden
Beech Street
Aldersgate Street
London Wall
Holborn Viaduct
Farringdon Street
Fleet Street
Strand
Victoria Embankment
Blackfriars Bridge
Blackfriars Road
Southwark Street
Upper Thames Street
Lower Thames Street
London Bridge
Cheapside
Leadenhall Street
Lombard Street
Fenchurch Street
Bishopsgate
Houndsditch
Bevis Marks
Minories
Tower Hill
Farringdon
Barbican
Chancery Lane
Moorgate
London Liverpool Street
Liverpool Street
Shoreditch High Street
Aldgate East
Aldgate
St Paul's
City Thameslink
Bank
Mansion House
London Cannon Street
London Blackfriars
Temple
Monument
London Fenchurch Street
Tower Gateway
N
0
100
200
300 m

Killed/Seriously Injured (KSI) collisions by road condition (2012-16)

- Dry
- Wet
- Snow

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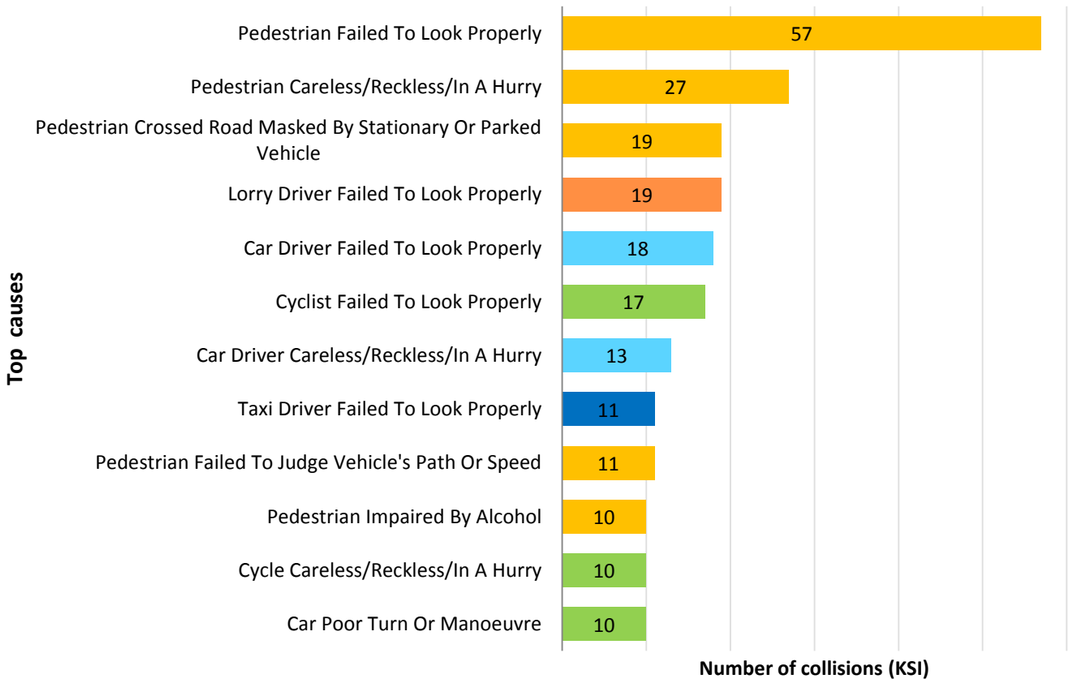
Contributing Factors and Modes Involved

Killed/Seriously Injured (KSI) – modes and contributing factors

Based on TfL Personal Injury Collision Data 2012-2016 (provisional)
261 KSI collisions recorded - 11 of which fatal, 250 resulting in serious injuries

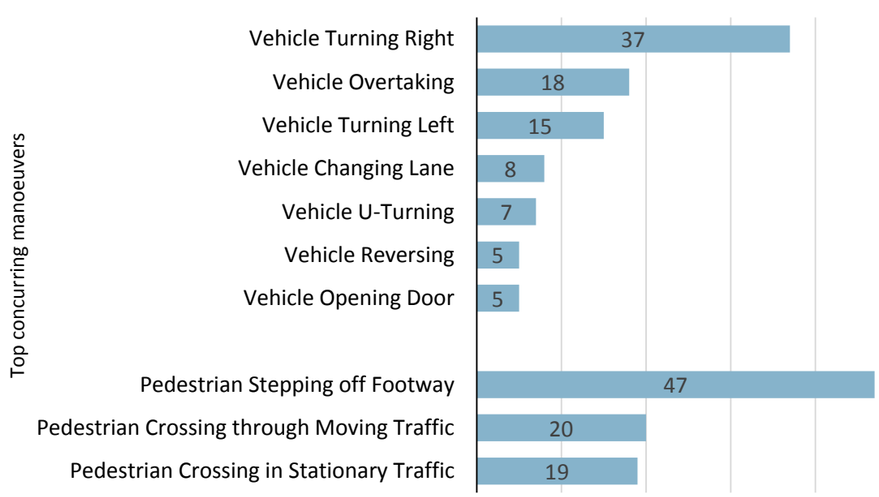
Most frequent contributing factors

(more than one factor can contribute to each collision)



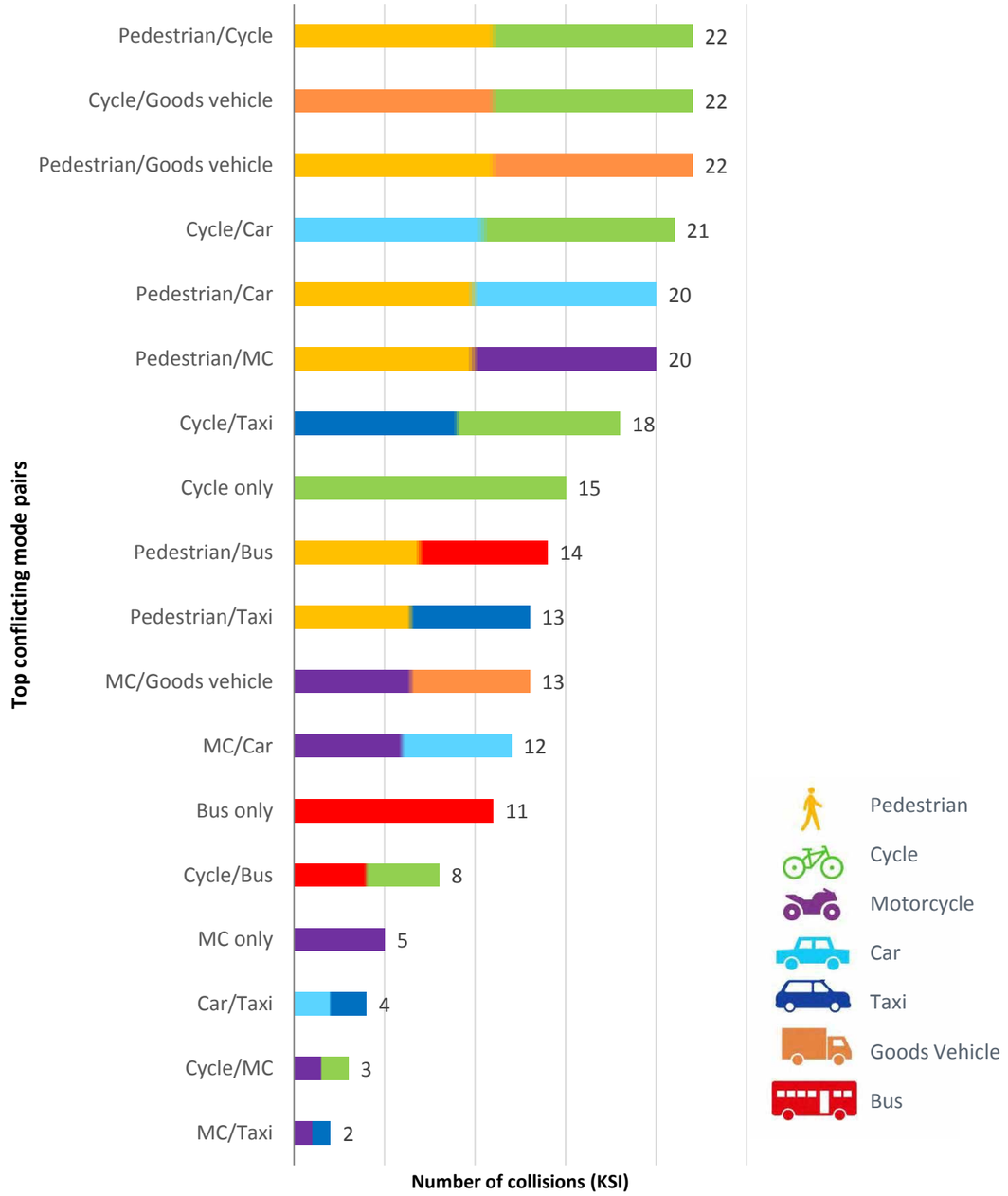
Most frequent concurring manoeuvres

(more than one can contribute to each collision)



Most frequent conflicting pairs

(more than one vehicle per mode can be involved)



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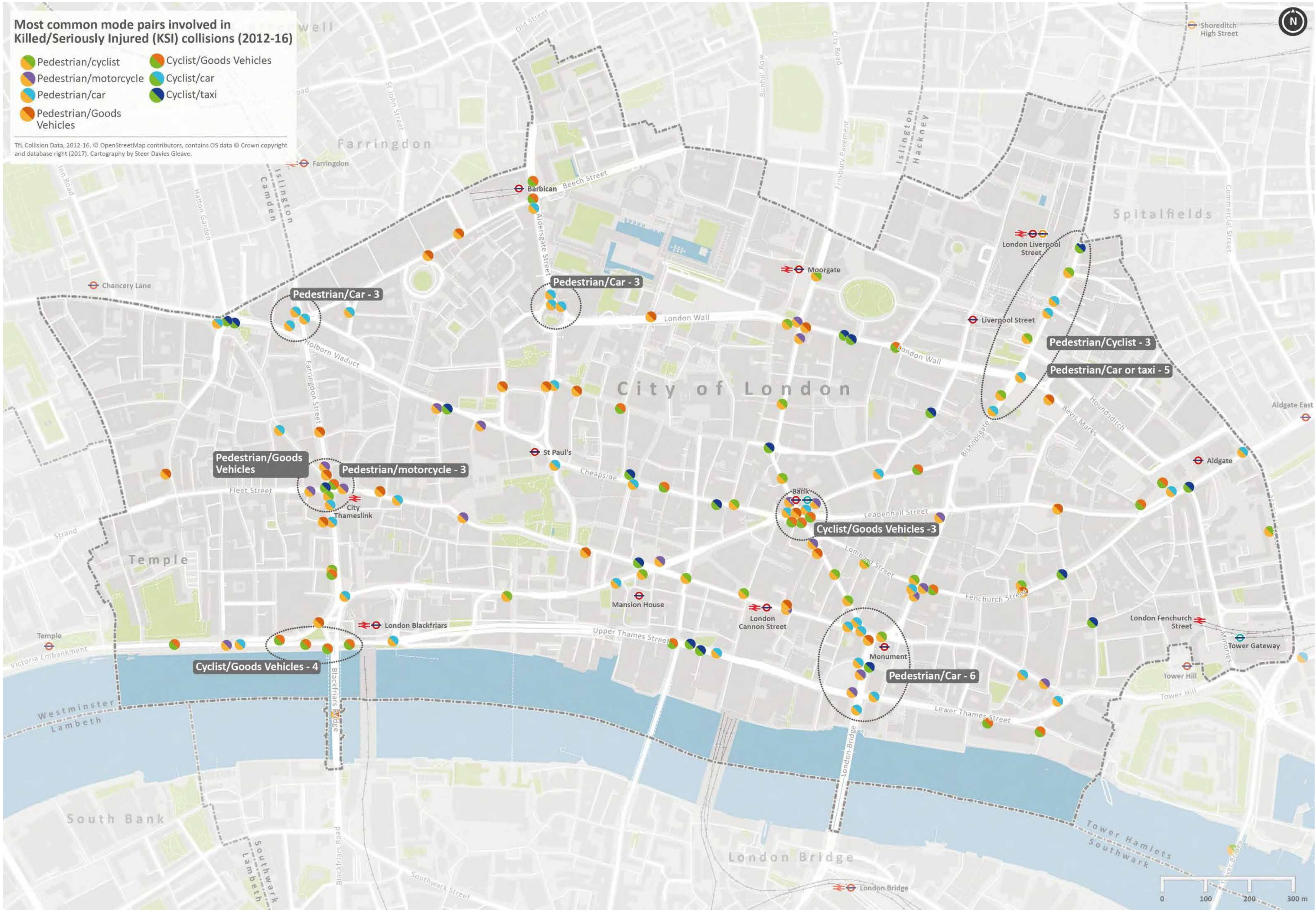
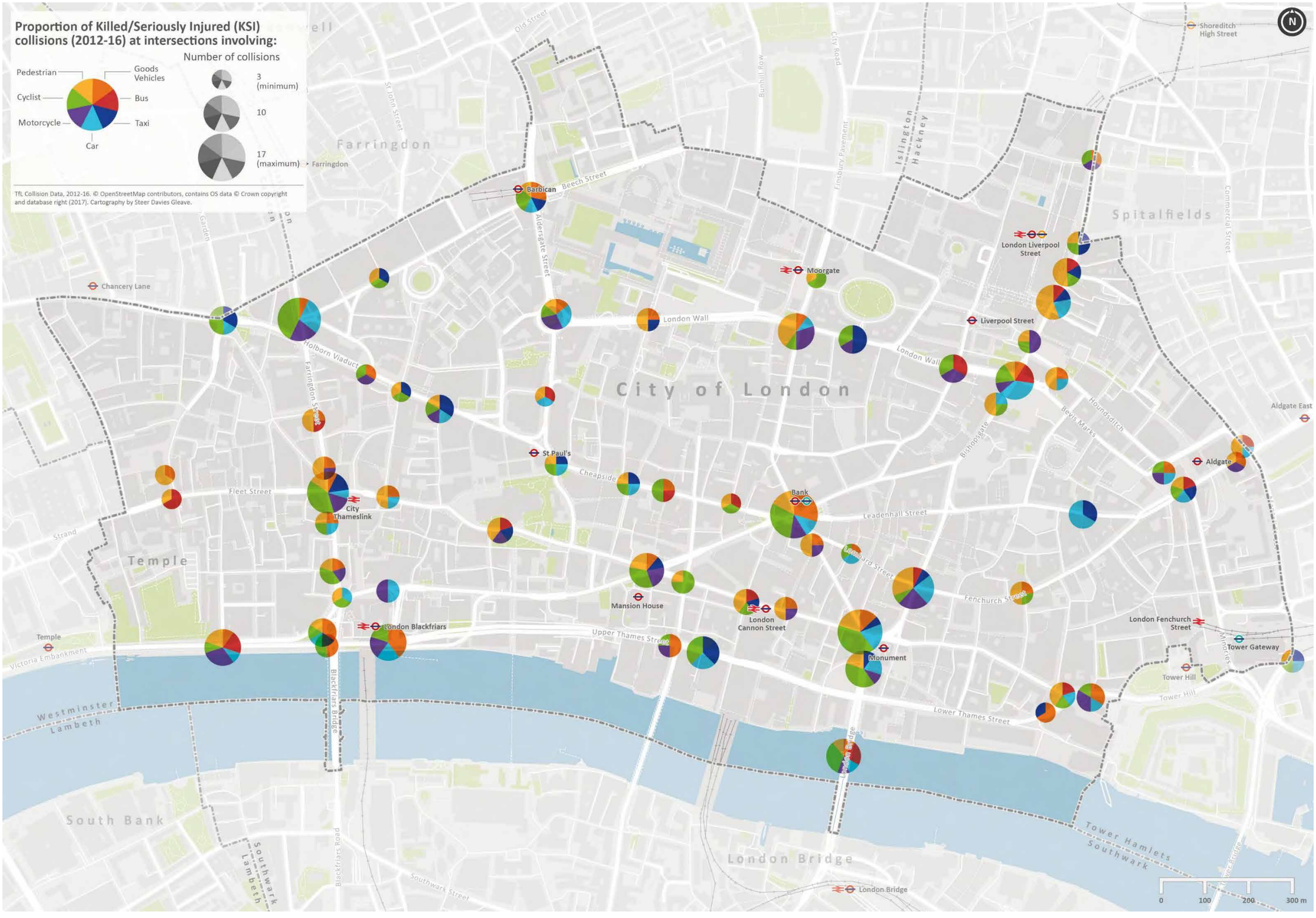
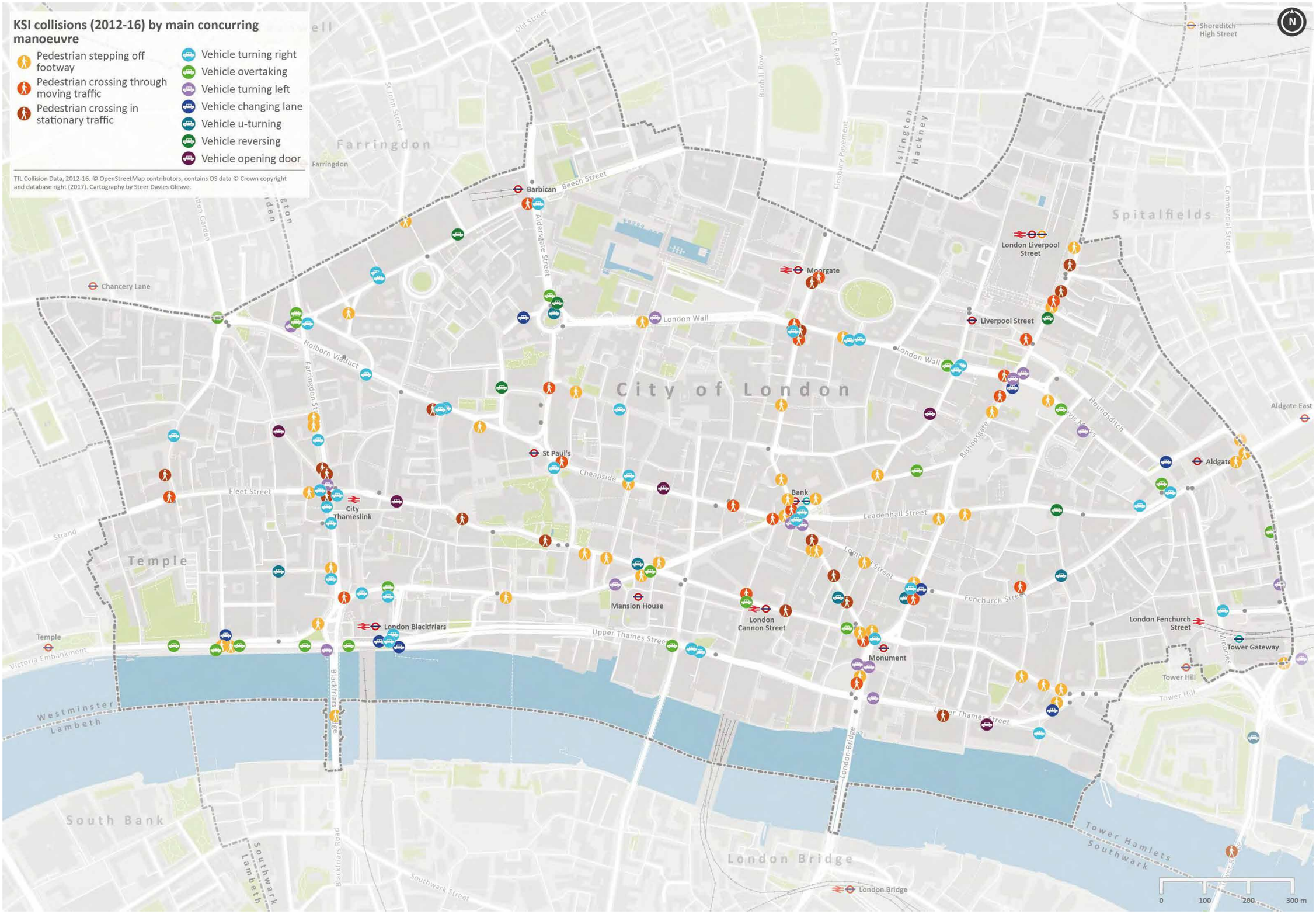


Most common mode pairs involved in Killed/Seriously Injured (KSI) collisions (2012-16)
Pedestrian/cyclist
Pedestrian/motorcycle
Pedestrian/car
Pedestrian/Goods Vehicles
Cyclist/Goods Vehicles
Cyclist/car
Cyclist/taxi
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
Pedestrian/Car - 3
Pedestrian/Car - 3
Pedestrian/Cyclist - 3
Pedestrian/Car or taxi - 5
Pedestrian/Goods Vehicles
Pedestrian/motorcycle - 3
Cyclist/Goods Vehicles -3
Cyclist/Goods Vehicles - 4
Pedestrian/Car - 6
City of London
Farringdon
Spitalfields
Temple
South Bank
London Bridge
Barbican
Moorgate
London Liverpool Street
Liverpool Street
St Paul's
Bank
City Thameslink
Mansion House
London Cannon Street
London Blackfriars
Monument
London Fenchurch Street
Tower Gateway
Tower Hill
Aldgate
Aldgate East
Chancery Lane
Farringdon
Temple
Shoreditch High Street
London Bridge
London Wall
Cheapside
Fleet Street
Leadenhall Street
Lombard Street
Fenchurch Street
Upper Thames Street
Lower Thames Street
Holborn Viaduct
Farringdon Street
Aldersgate Street
Beech Street
Victoria Embankment
Blackfriars Bridge
London Bridge
Bishopsgate
Houndsditch
Bevis Marks
Westminster
Lambeth
Tower Hamlets
Southwark
0 100 200 300 m


Proportion of Killed/Seriously Injured (KSI) collisions (2012-16) at intersections involving:
Pedestrian
Goods Vehicles
Cyclist
Bus
Motorcycle
Taxi
Car
Number of collisions
3 (minimum)
10
17 (maximum)
Farringdon
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
Old Street
St John Street
Bunhill Row
City Road
Finsbury Pavement
Islington
Hackney
Shoreditch High Street
Farringdon
Barbican
Beech Street
Aldersgate Street
Spitalfields
Commercial Street
London Liverpool Street
Moorgate
Chancery Lane
London Wall
Liverpool Street
Holborn Viaduct
Farringdon Street
City of London
Aldgate East
Bevis Marks
Houndsditch
Bishopsgate
St Paul's
Cheapside
Aldgate
Fleet Street
City Thameslink
Bank
Leadenhall Street
Leonard Street
Strand
Temple
Mansion House
London Cannon Street
Fenchurch Street
London Fenchurch Street
Tower Gateway
Minories
Tower Hill
Monument
London Blackfriars
Upper Thames Street
Lower Thames Street
Victoria Embankment
Blackfriars Bridge
Westminster
Lambeth
South Bank
Southwark
Blackfriars Road
Southwark Street
London Bridge
Tower Hamlets
0
100
200
300 m


KSI collisions (2012-16) by main concurring manoeuvre
Pedestrian stepping off footway
Pedestrian crossing through moving traffic
Pedestrian crossing in stationary traffic
Vehicle turning right
Vehicle overtaking
Vehicle turning left
Vehicle changing lane
Vehicle u-turning
Vehicle reversing
Vehicle opening door
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
N
Farringdon
Barbican
Beech Street
Aldersgate Street
Old Street
St John Street
Bunhill Row
City Road
Finsbury Pavement
Islington
Hackney
Shoreditch High Street
Spitalfields
Commercial Street
London Liverpool Street
Moorgate
Liverpool Street
London Wall
Chancery Lane
Holborn Viaduct
Farringdon Street
City of London
St Paul's
Cheapside
Bank
Leadenhall Street
Lombard Street
Fenchurch Street
Aldgate East
Houndsditch
Bishopsgate
Aldgate
Fleet Street
City Thameslink
Strand
Temple
Mansion House
London Cannon Street
London Blackfriars
Upper Thames Street
Monument
London Fenchurch Street
Tower Gateway
Minories
Tower Hill
Victoria Embankment
Westminster
Lambeth
Blackfriars Bridge
Blackfriars Road
South Bank
Southwark
Southwark Street
London Bridge
Tower Hamlets
0
100
200
300 m

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Focus on Vulnerable Users

Killed/Seriously Injured (KSI) Collisions involving pedestrians

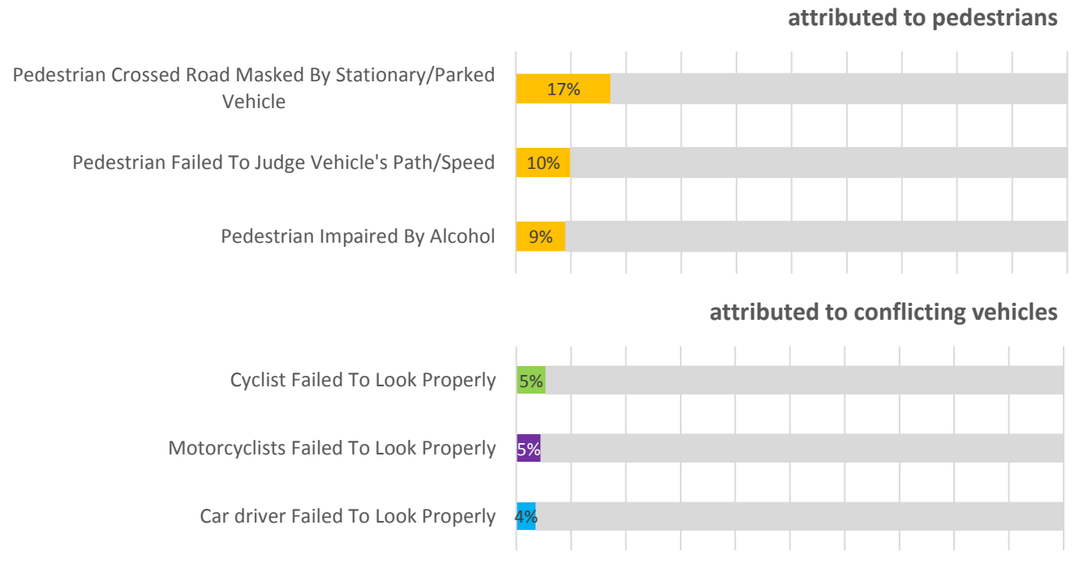
Based on TfL Personal Injury Collision Data 2012-2016 (provisional)
110 KSI collisions recorded - 4 of which fatal, 106 resulting in serious injuries

Collision Hotspots

assignment based on TfL nodal system
(each of them recorded 4 collisions involving pedestrians)

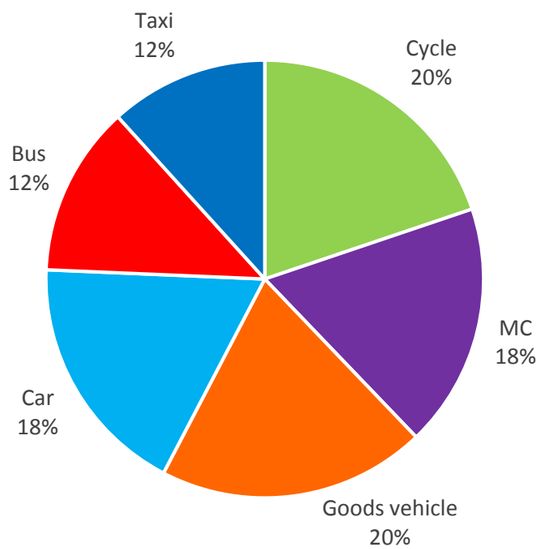
Most frequent contributing factors

(more than one factor can contribute to each collision)



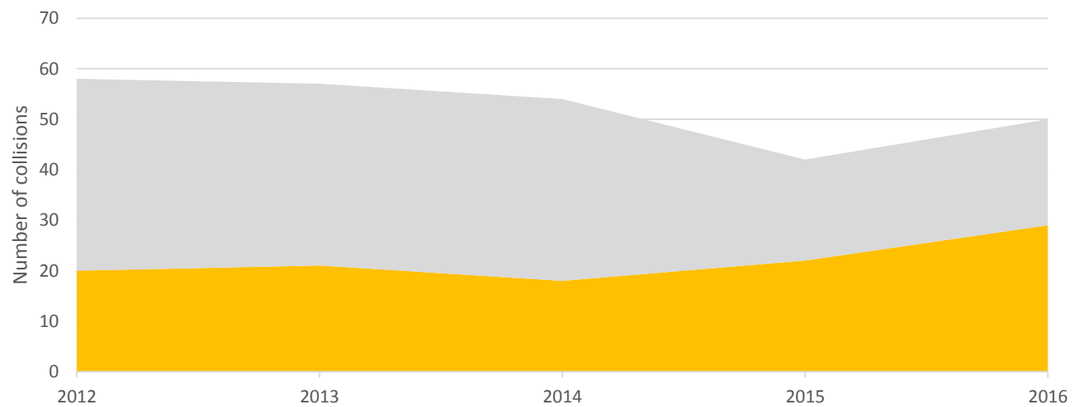
Modes involved in collisions with pedestrians

(by percentage)

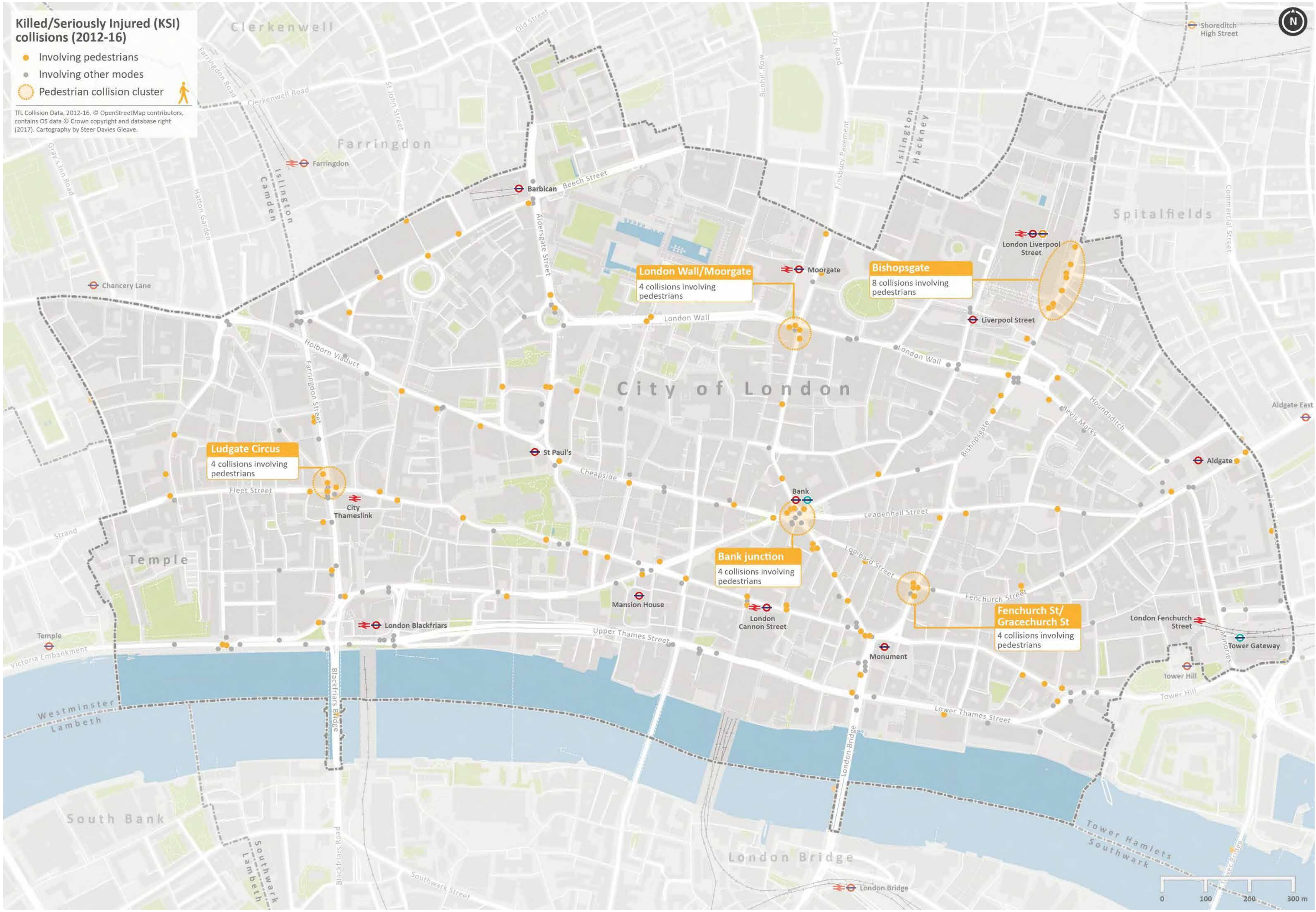


Yearly profile

(total and pedestrian related-collisions)



Year	2012	2013	2014	2015	2016
Collisions	58	57	54	42	50
Collisions involving pedestrians	20	21	18	22	29
% of the total	34%	37%	33%	52%	58%



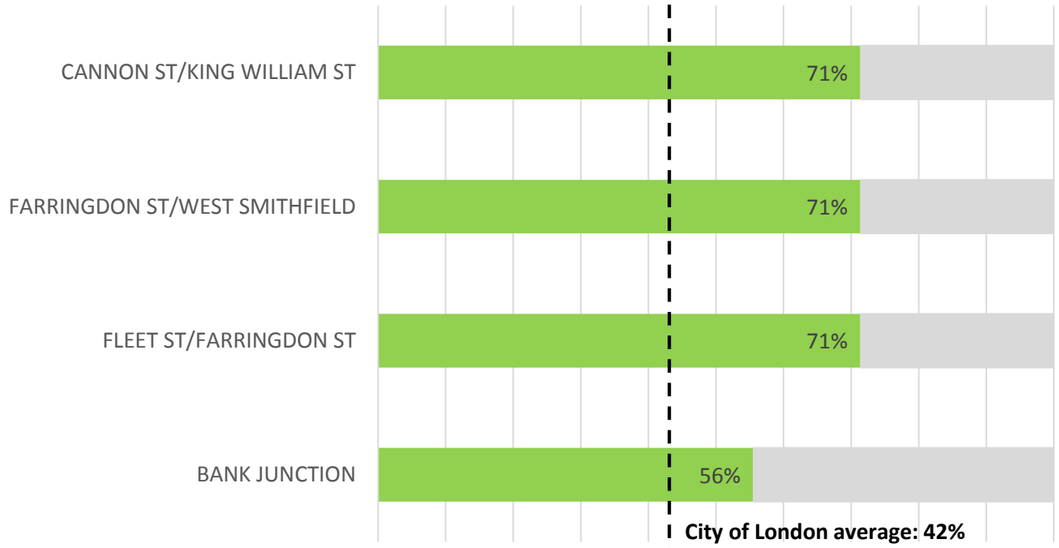
Killed/Seriously Injured (KSI) collisions (2012-16)
Involving pedestrians
Involving other modes
Pedestrian collision cluster
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
London Wall/Moorgate
4 collisions involving pedestrians
Bishopsgate
8 collisions involving pedestrians
Ludgate Circus
4 collisions involving pedestrians
Bank junction
4 collisions involving pedestrians
Fenchurch St/ Gracechurch St
4 collisions involving pedestrians
City of London
Clerkenwell
Farringdon
Spitalfields
Temple
South Bank
London Bridge
Westminster
Lambeth
Islington
Camden
Hackney
Tower Hamlets
Southwark
Barbican
Moorgate
London Liverpool Street
Liverpool Street
Chancery Lane
St Paul's
City Thameslink
Bank
Mansion House
London Cannon Street
London Blackfriars
Monument
Aldgate
Aldgate East
London Fenchurch Street
Tower Gateway
Tower Hill
Temple
London Bridge
Shoreditch High Street
Beech Street
London Wall
Holborn Viaduct
Fleet Street
Cheapside
Leadenhall Street
Lombard Street
Fenchurch Street
Upper Thames Street
Lower Thames Street
Bishopsgate
Houndsditch
Bevis Marks
Aldersgate Street
Farringdon Street
Blackfriars Bridge
London Bridge
Strand
Victoria Embankment
Southwark Street
Blackfriars Road
0
100
200
300 m

Killed/Seriously Injured (KSI) Collisions involving cyclists

Based on TfL Personal Injury Collision Data 2012-2016 (provisional)
111 KSI collisions recorded - 6 of which fatal, 105 resulting in serious injuries

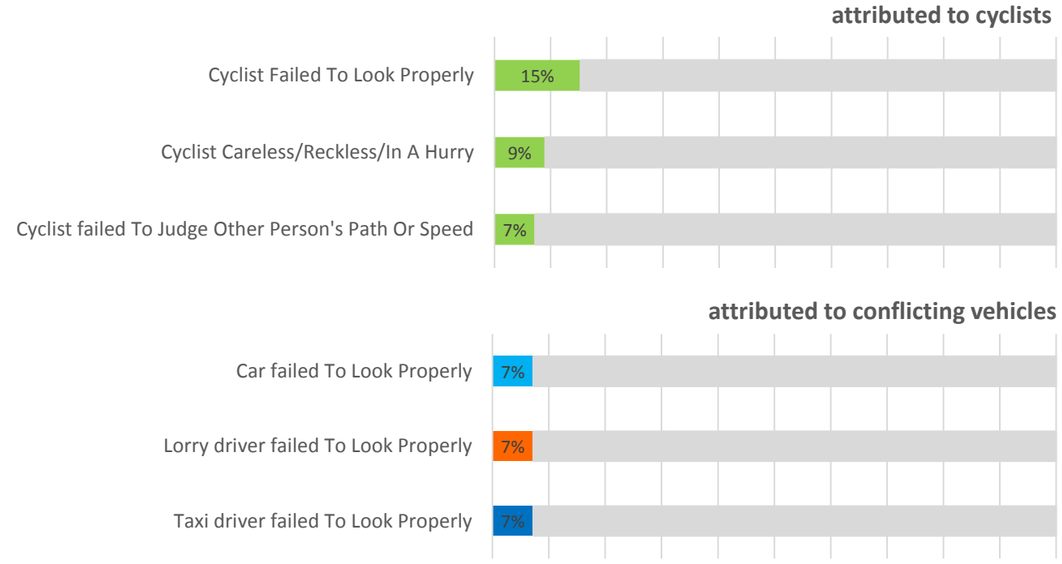
Collision Hotspots

assignment based on TfL nodal system
(each of them recorded 5 collisions involving cyclists)



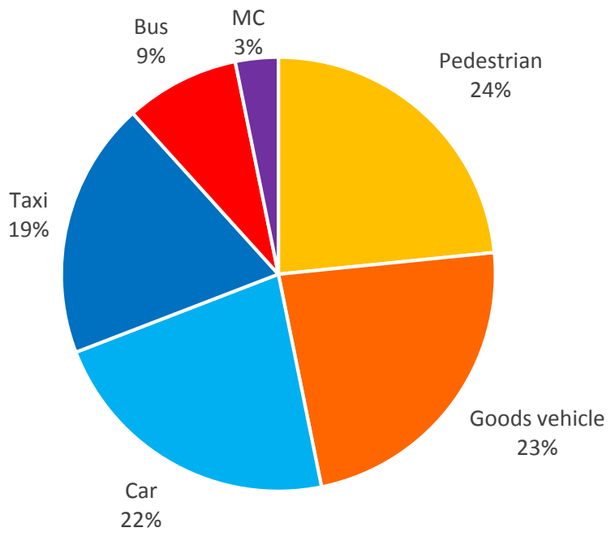
Most frequent contributing factors

(more than one factor can contribute to each collision)



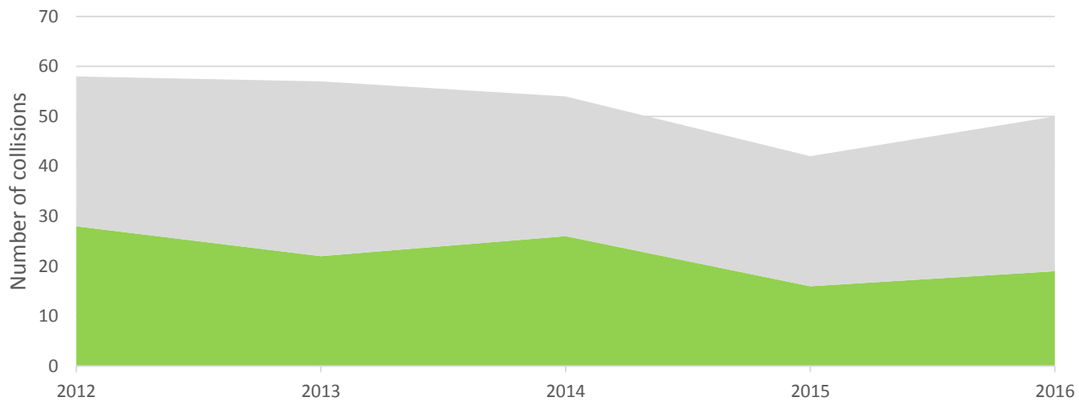
Modes involved in collisions with cyclists

(by percentage)

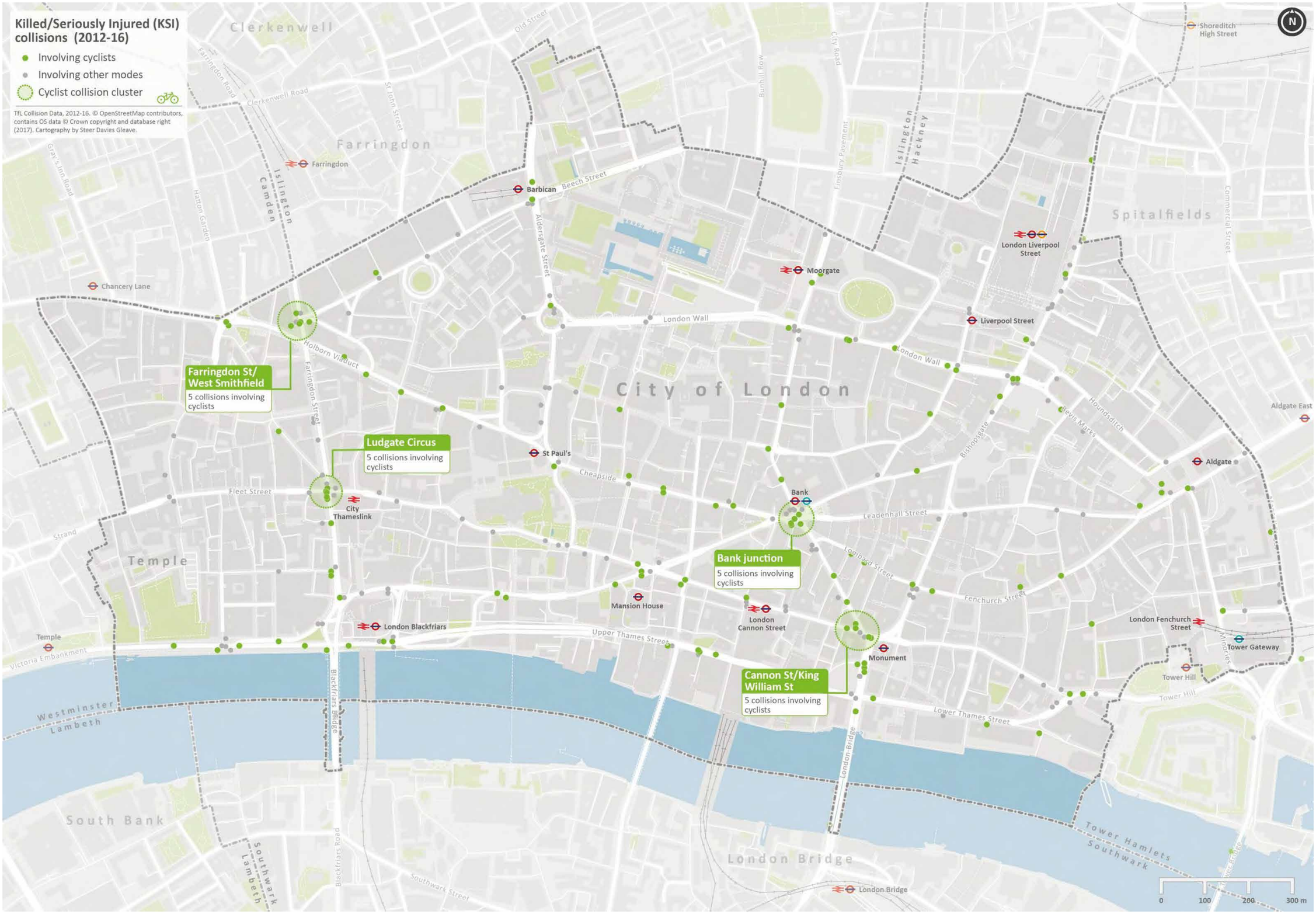


Yearly profile

(total and cyclist related-collisions)



Year	2012	2013	2014	2015	2016
Collisions	58	57	54	42	50
Collisions involving cyclists	28	22	26	16	19
% of the total	48%	39%	48%	38%	38%

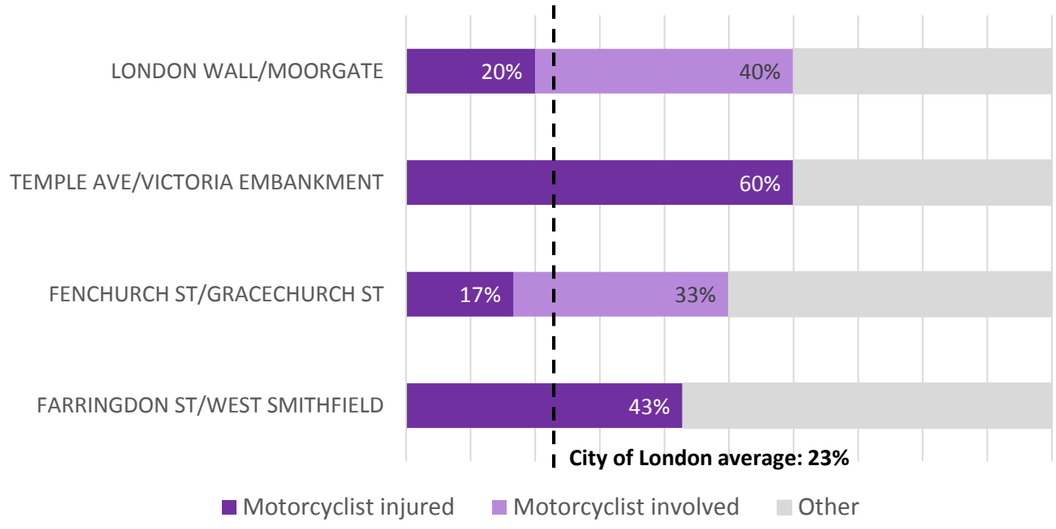

Killed/Seriously Injured (KSI) collisions (2012-16)
Involving cyclists
Involving other modes
Cyclist collision cluster
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
Farringdon St/ West Smithfield
5 collisions involving cyclists
Ludgate Circus
5 collisions involving cyclists
Bank junction
5 collisions involving cyclists
Cannon St/King William St
5 collisions involving cyclists
Clerkenwell
Farringdon
City of London
Spitalfields
Temple
South Bank
London Bridge
Barbican
Moorgate
London Liverpool Street
Liverpool Street
Chancery Lane
St Paul's
Bank
Mansion House
London Cannon Street
Monument
London Blackfriars
City Thameslink
Aldgate
Aldgate East
Shoreditch High Street
London Fenchurch Street
Tower Gateway
Tower Hill
Old Street
Clerkenwell Road
Farringdon Road
St John Street
Beech Street
Aldersgate Street
London Wall
Holborn Viaduct
Farringdon Street
Fleet Street
Cheapside
Leadenhall Street
Lombard Street
Fenchurch Street
Upper Thames Street
Lower Thames Street
Blackfriars Bridge
Blackfriars Road
London Bridge
Southwark Street
Gray's Inn Road
Hatton Garden
Islington
Camden
Bunhill Row
City Road
Finsbury Pavement
Islington
Hackney
Commercial Street
Bevis Marks
Houndsditch
Bishopsgate
Minories
Strand
Victoria Embankment
Temple
Westminster
Lambeth
Southwark
Lambeth
Tower Hamlets
Southwark
N
0
100
200
300 m

Killed/Seriously Injured (KSI) Collisions involving motorcyclists

Based on TfL Personal Injury Collision Data 2012-2016 (provisional)
60 KSI collisions recorded - 1 of which fatal, 59 resulting in serious injuries

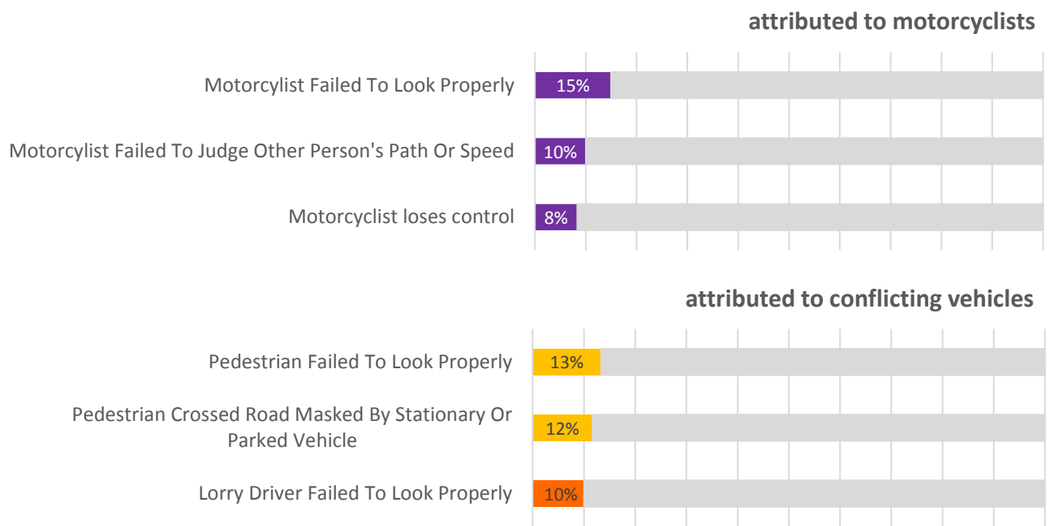
Collision Hotspots

assignment based on TfL nodal system
(each of them recorded 3 collisions involving motorcyclists)



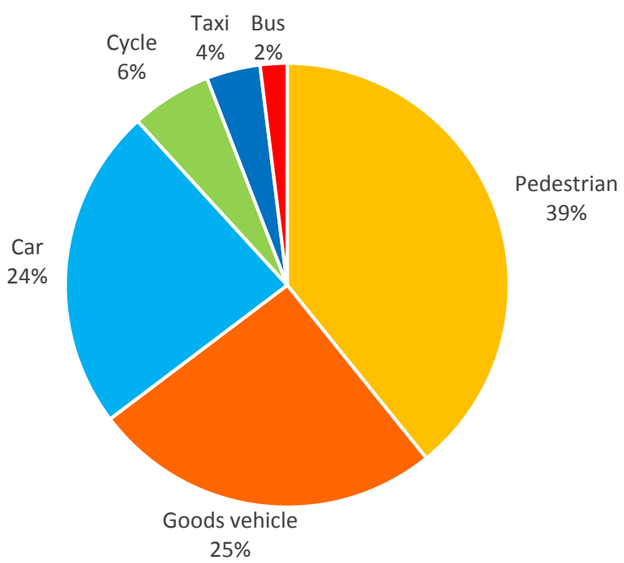
Most frequent contributing factors

(more than one factor can contribute to each collision)



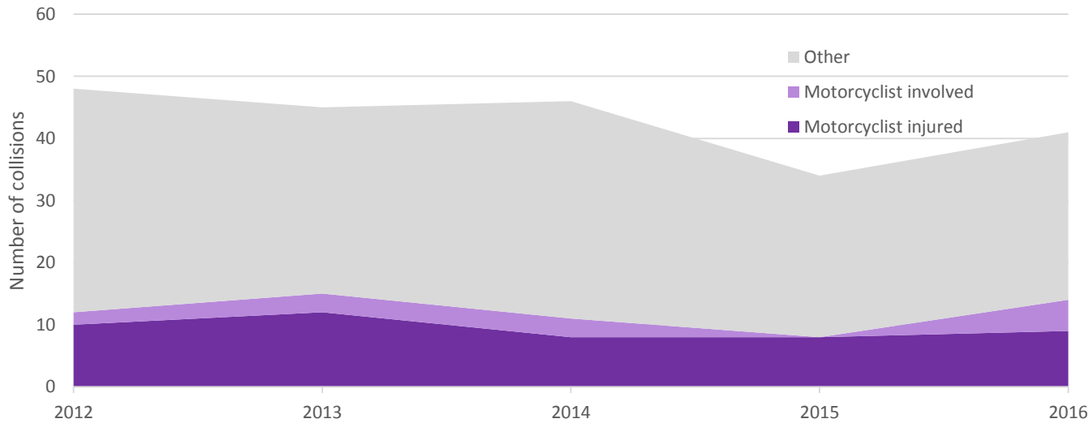
Modes involved in collisions with motorcyclists

(by percentage)

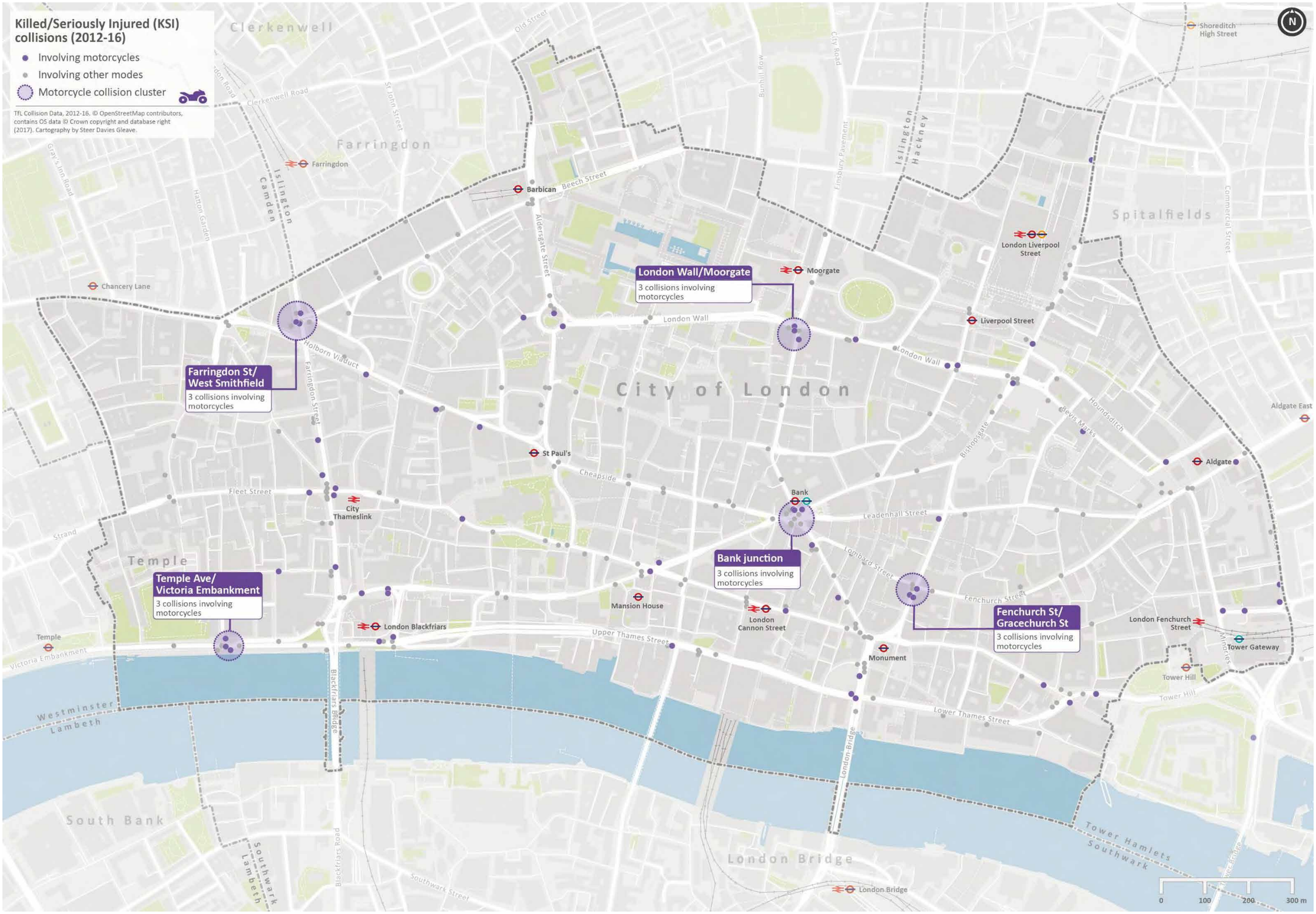


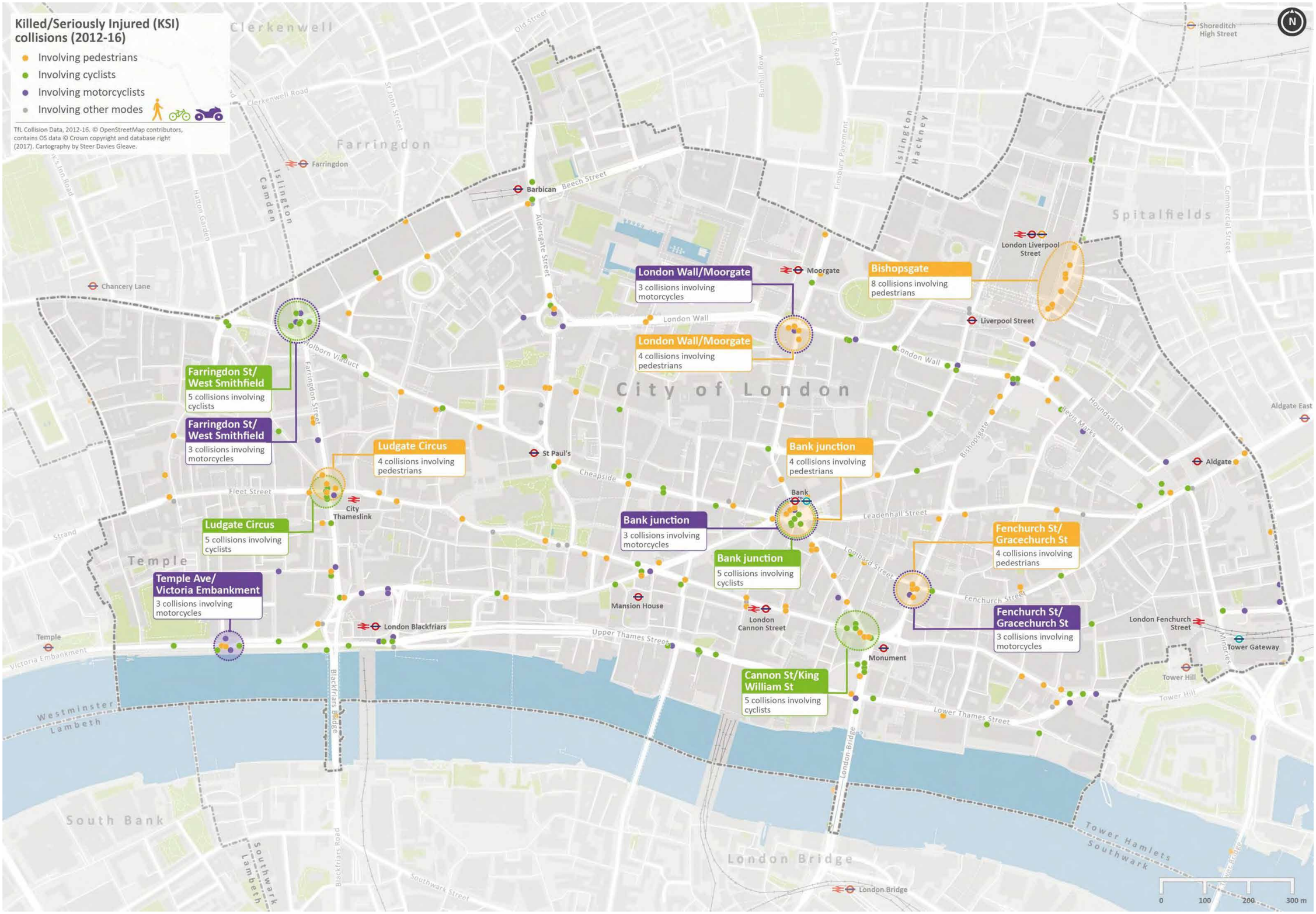
Yearly profile

(total and motorcyclist related-collisions)



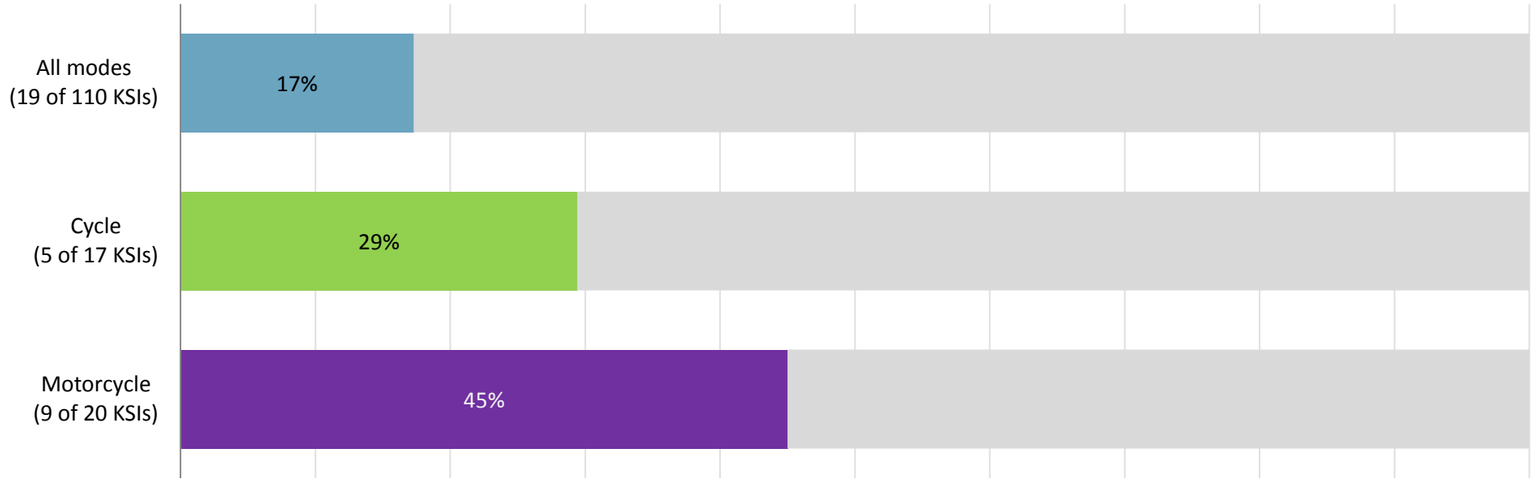
Year	2012	2013	2014	2015	2016
Collisions	58	57	54	42	50
Collisions involving motorcyclists	12	15	11	8	14
% of the total	21%	26%	20%	19%	28%


Killed/Seriously Injured (KSI) collisions (2012-16)
Involving motorcycles
Involving other modes
Motorcycle collision cluster
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
Farringdon St/ West Smithfield
3 collisions involving motorcycles
London Wall/Moorgate
3 collisions involving motorcycles
Bank junction
3 collisions involving motorcycles
Temple Ave/ Victoria Embankment
3 collisions involving motorcycles
Fenchurch St/ Gracechurch St
3 collisions involving motorcycles
Clerkenwell
Farringdon
City of London
Spitalfields
Temple
South Bank
London Bridge
Tower Hamlets
Southwark
Westminster
Lambeth
Islington
Camden
Islington
Hackney
Tower Hamlets
Southwark
Lambeth
Farringdon
Barbican
Chancery Lane
St Paul's
City Thameslink
London Blackfriars
Mansion House
Bank
London Cannon Street
Monument
Moorgate
London Liverpool Street
Liverpool Street
Shoreditch High Street
Aldgate
Aldgate East
London Fenchurch Street
Tower Gateway
Tower Hill
London Bridge
Old Street
Clerkenwell Road
St John Street
Beech Street
Aldersgate Street
London Wall
Holborn Viaduct
Farringdon Street
Fleet Street
Strand
Cheapside
Upper Thames Street
Lower Thames Street
Blackfriars Bridge
Blackfriars Road
Southwark Street
London Bridge
Leadenhall Street
Lombard Street
Fenchurch Street
Bunhill Row
City Road
Finsbury Pavement
Commercial Street
Bevis Marks
Houndsditch
Minories
Gray's Inn Road
Hatton Garden
Victoria Embankment
0
100
200
300 m
N


Killed/Seriously Injured (KSI) collisions (2012-16)
Involving pedestrians
Involving cyclists
Involving motorcyclists
Involving other modes
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
Clerkenwell
Farringdon
Spitalfields
City of London
Temple
South Bank
London Bridge
Westminster
Lambeth
Southwark
Tower Hamlets
Old Street
Clerkenwell Road
St John Street
Farringdon
Barbican
Beech Street
Aldersgate Street
Chancery Lane
Holborn Viaduct
Farringdon Street
Fleet Street
City Thameslink
Strand
Temple
Victoria Embankment
London Blackfriars
Blackfriars Bridge
Blackfriars Road
Southwark Street
Upper Thames Street
Lower Thames Street
London Bridge
Mansion House
London Cannon Street
Monument
Cheapside
St Paul's
Bank
Moorgate
London Wall
Liverpool Street
London Liverpool Street
Shoreditch High Street
Aldgate
Aldgate East
Tower Gateway
Tower Hill
London Fenchurch Street
Leadenhall Street
Lombard Street
Fenchurch Street
Bishopsgate
Bevis Marks
Houndsditch
Minories
Commercial Street
Finsbury Pavement
City Road
Bunhill Row
Islington
Hackney
Islington
Camden
Hatton Garden
W.C. Inn Road
London Wall/Moorgate
3 collisions involving motorcycles
London Wall/Moorgate
4 collisions involving pedestrians
Bishopsgate
8 collisions involving pedestrians
Farringdon St/ West Smithfield
5 collisions involving cyclists
Farringdon St/ West Smithfield
3 collisions involving motorcycles
Ludgate Circus
4 collisions involving pedestrians
Ludgate Circus
5 collisions involving cyclists
Temple Ave/ Victoria Embankment
3 collisions involving motorcycles
Bank junction
4 collisions involving pedestrians
Bank junction
3 collisions involving motorcycles
Bank junction
5 collisions involving cyclists
Fenchurch St/ Gracechurch St
4 collisions involving pedestrians
Fenchurch St/ Gracechurch St
3 collisions involving motorcycles
Cannon St/King William St
5 collisions involving cyclists
0
100
200
300 m

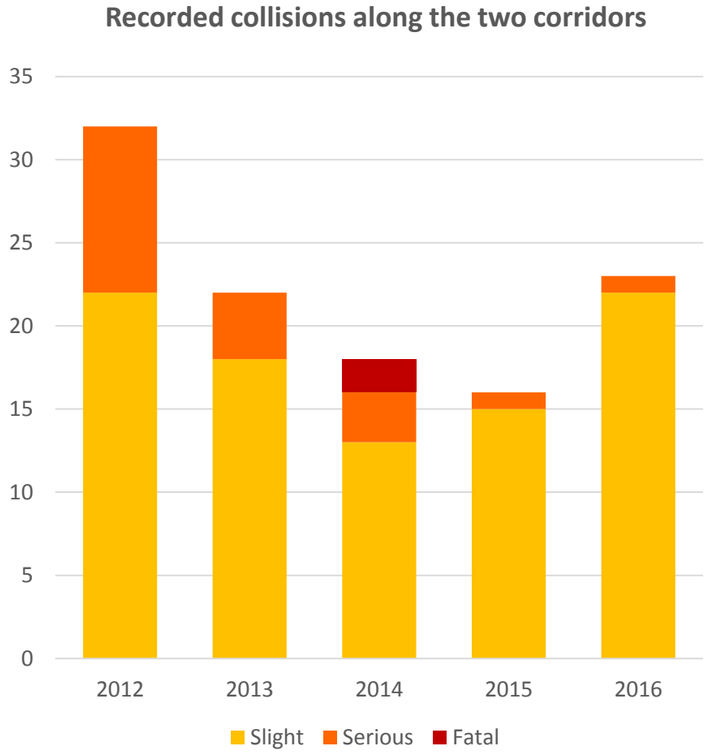
Impact of stationary traffic on collisions involving pedestrians and 2-wheelers

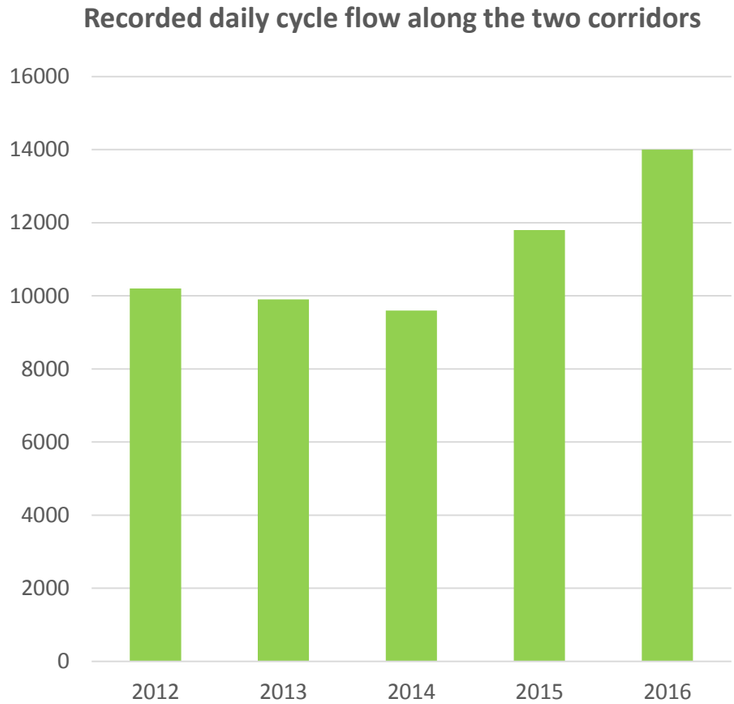
Share of pedestrian-related collisions listing 'pedestrian crossing masked by stationary traffic or parked vehicle' as contributing factor



Based on TfL Personal Injury Collision Data 2012-2016 (provisional): 110 KSI collisions recorded - 4 of which fatal, 106 resulting in serious injuries

The opening of Cycle Superhighway 3 (East-West) and Cycle Superhighway 6 (North-South)





Collision data based on TfL Personal Injury Collision Data 2012-2016 (provisional): 57 collisions recorded - 2 of which fatal, 7 resulting in serious injuries, 48 in slight injuries.

Traffic Flows based on 24Hour Traffic Composition Survey undertaken along New Bridge Street and Upper Thames Street by Mouchel for City of London Corporation, March 2017.

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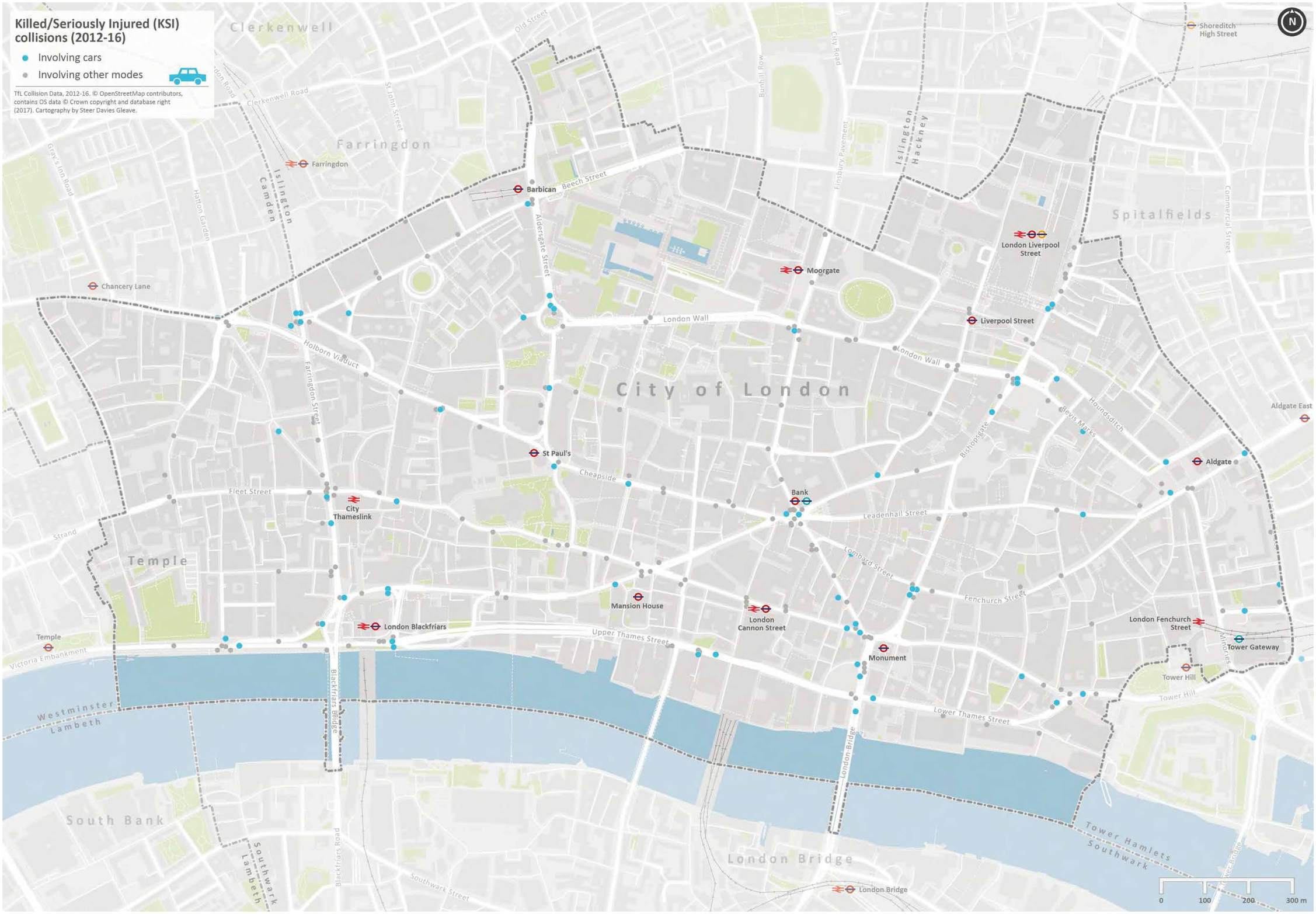
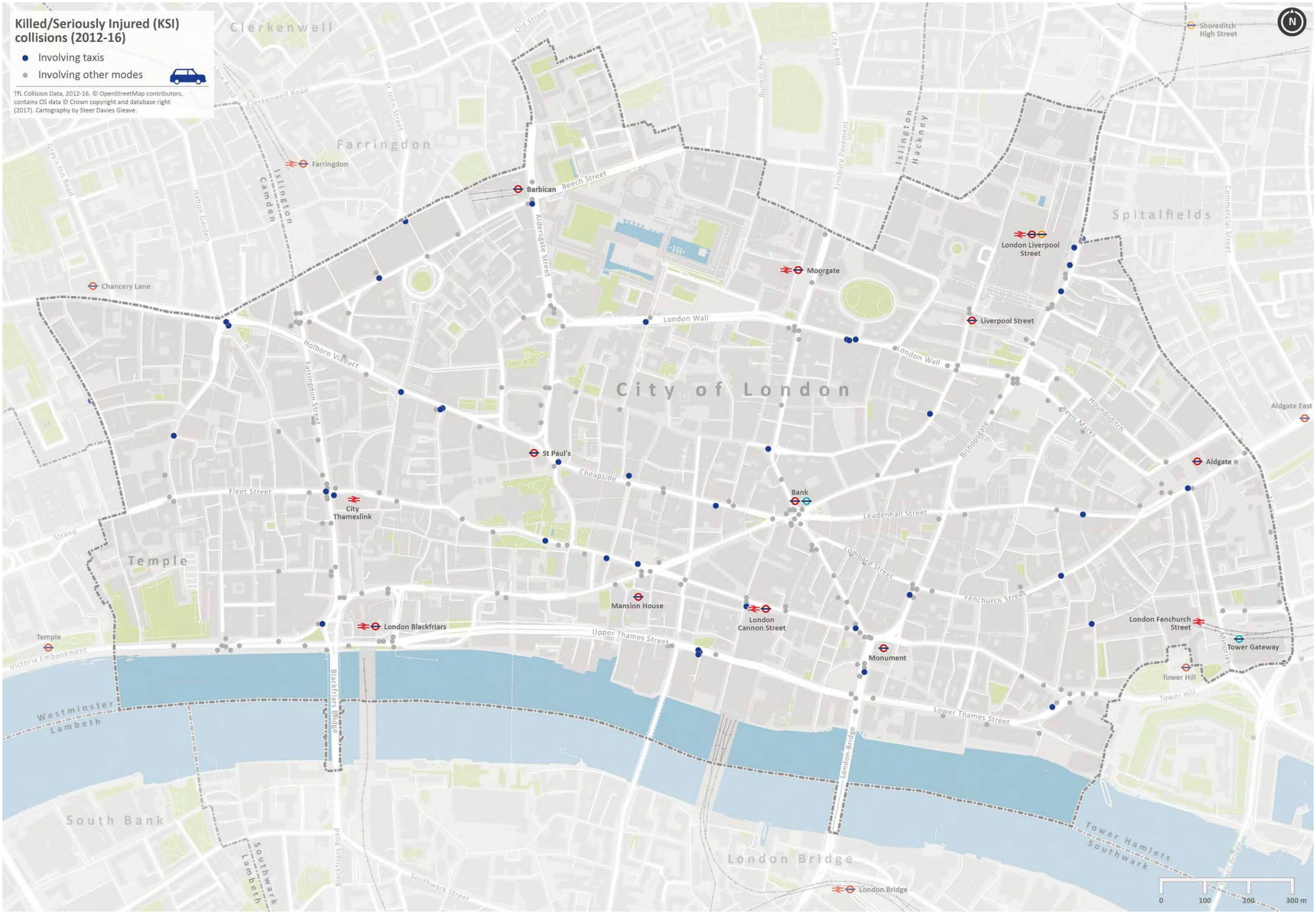
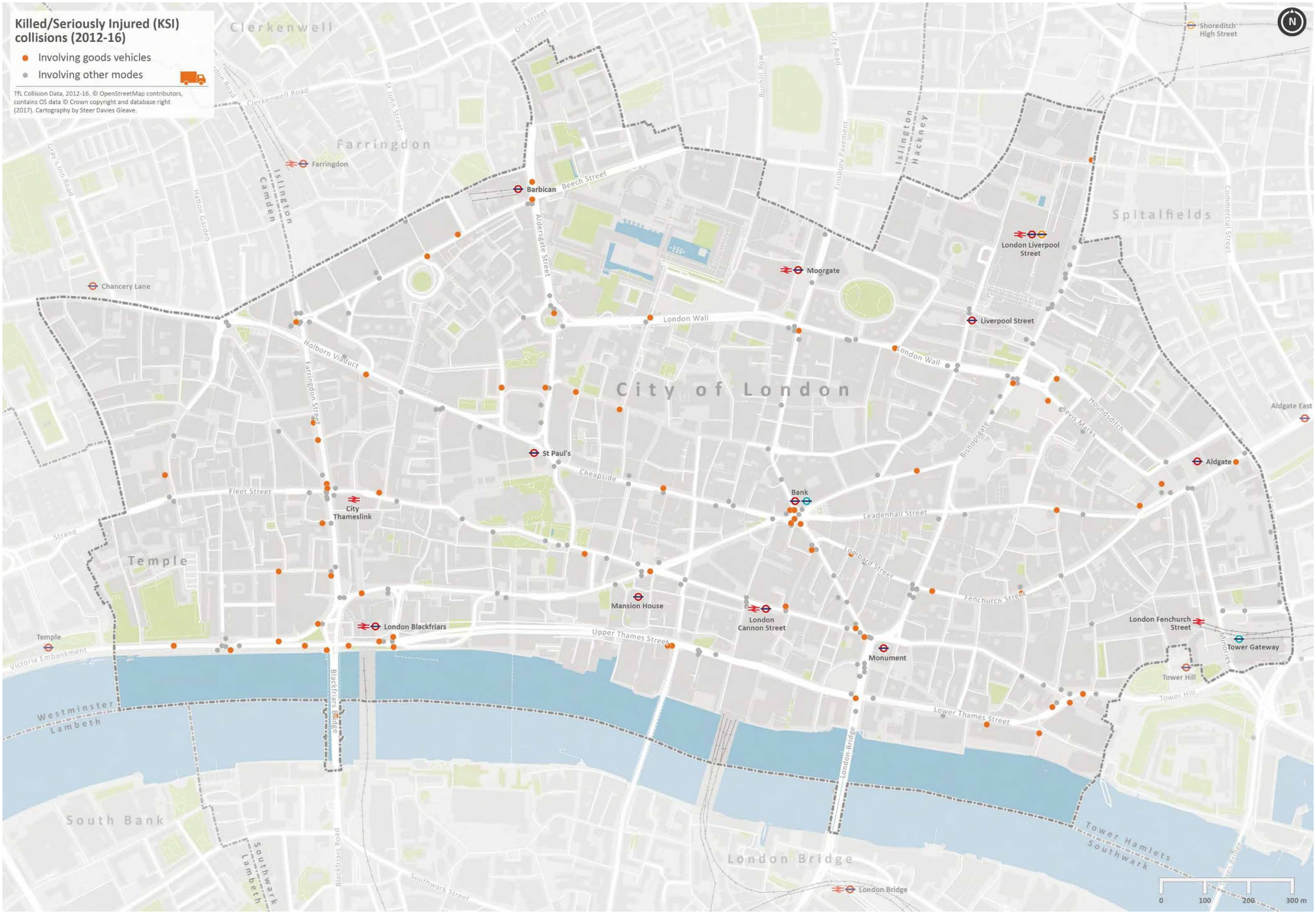
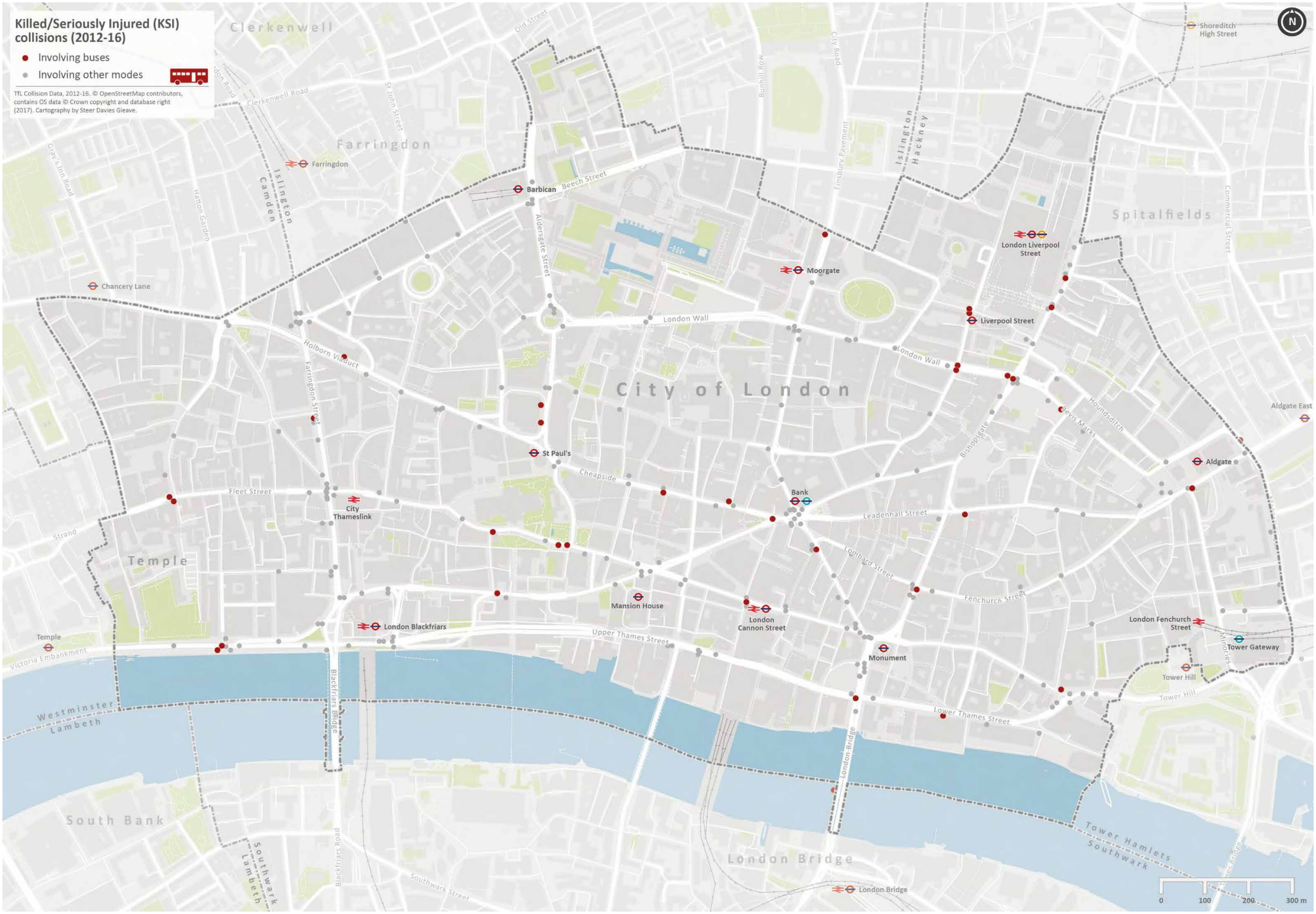
Appendix A
Other Road Users


Killed/Seriously Injured (KSI) collisions (2012-16)
Involving cars
Involving other modes
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
N
Clerkenwell
Farringdon
City of London
Spitalfields
Temple
South Bank
London Bridge
Westminster
Lambeth
Southwark
Tower Hamlets
Old Street
Clerkenwell Road
St John Street
Bunhill Row
City Road
Finsbury Pavement
Islington
Hackney
Commercial Street
Gray's Inn Road
Hatton Garden
Islington
Camden
Beech Street
Aldersgate Street
London Wall
Holborn Viaduct
Farringdon Street
Cheapside
Fleet Street
Strand
Victoria Embankment
Blackfriars Bridge
Blackfriars Road
Southwark Street
Leadenhall Street
Lombard Street
Fenchurch Street
Upper Thames Street
Lower Thames Street
London Bridge
Bevis Marks
Houndsditch
Bishopsgate
Minories
Tower Hill
Farringdon
Barbican
Chancery Lane
Moorgate
London Liverpool Street
Liverpool Street
St Paul's
City Thameslink
Bank
Mansion House
London Cannon Street
Monument
London Blackfriars
Temple
Aldgate
Aldgate East
Shoreditch High Street
London Fenchurch Street
Tower Gateway
Tower Hill
0
100
200
300 m


Killed/Seriously Injured (KSI) collisions (2012-16)
Involving taxis
Involving other modes
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
N
Clerkenwell
Farringdon
City of London
Spitalfields
Temple
South Bank
London Bridge
Old Street
Clerkenwell Road
St John Street
Farringdon
Barbican
Beech Street
Aldersgate Street
Bunhill Row
City Road
Finsbury Pavement
Islington
Hackney
Shoreditch High Street
Commercial Street
Gray's Inn Road
Hatton Garden
Islington
Camden
Chancery Lane
Moorgate
London Liverpool Street
Liverpool Street
London Wall
Holborn Viaduct
Farringdon Street
St Paul's
Cheapside
Bank
Leadenhall Street
Lombard Street
Fenchurch Street
Bishopsgate
Bevis Marks
Houndsditch
Aldgate
Aldgate East
Fleet Street
City Thameslink
Strand
Temple
Victoria Embankment
Mansion House
London Blackfriars
London Cannon Street
Upper Thames Street
Monument
London Fenchurch Street
Tower Gateway
Minories
Tower Hill
Lower Thames Street
London Bridge
Tower Hamlets
Southwark
Westminster
Lambeth
Blackfriars Bridge
Blackfriars Road
Southwark Street
Southwark
Lambeth
0
100
200
300 m


Killed/Seriously Injured (KSI) collisions (2012-16)
Involving goods vehicles
Involving other modes
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
N
Clerkenwell
Farringdon
Spitalfields
City of London
Temple
South Bank
London Bridge
Westminster
Lambeth
Southwark
Tower Hamlets
Islington
Camden
Hackney
Old Street
Clerkenwell Road
St John Street
Farringdon
Barbican
Beech Street
Aldersgate Street
Bunhill Row
City Road
Finsbury Pavement
Shoreditch High Street
Commercial Street
London Liverpool Street
Moorgate
Liverpool Street
London Wall
Aldgate East
Aldgate
Bevis Marks
Houndsditch
Gray's Inn Road
Hatton Garden
Chancery Lane
Holborn Viaduct
Farringdon Street
Fleet Street
City Thameslink
St Paul's
Cheapside
Bank
Leadenhall Street
Lombard Street
Fenchurch Street
Strand
Temple
Victoria Embankment
Blackfriars Bridge
Blackfriars Road
London Blackfriars
Mansion House
London Cannon Street
Upper Thames Street
Lower Thames Street
Monument
London Bridge
London-Bridge
Southwark Street
London Fenchurch Street
Tower Gateway
Tower Hill
Minories
0
100
200
300 m


Killed/Seriously Injured (KSI) collisions (2012-16)
Involving buses
Involving other modes
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
N
Clerkenwell
Farringdon
Spitalfields
City of London
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South Bank
London Bridge
Old Street
Clerkenwell Road
St John Street
Farringdon
Barbican
Beech Street
Aldersgate Street
Finsbury Pavement
Bunhill Row
City Road
Islington
Hackney
Shoreditch High Street
Commercial Street
London Liverpool Street
Liverpool Street
Moorgate
Aldgate East
Aldgate
Bevis Marks
Houndsditch
London Wall
Leadenhall Street
Bank
Lombard Street
Fenchurch Street
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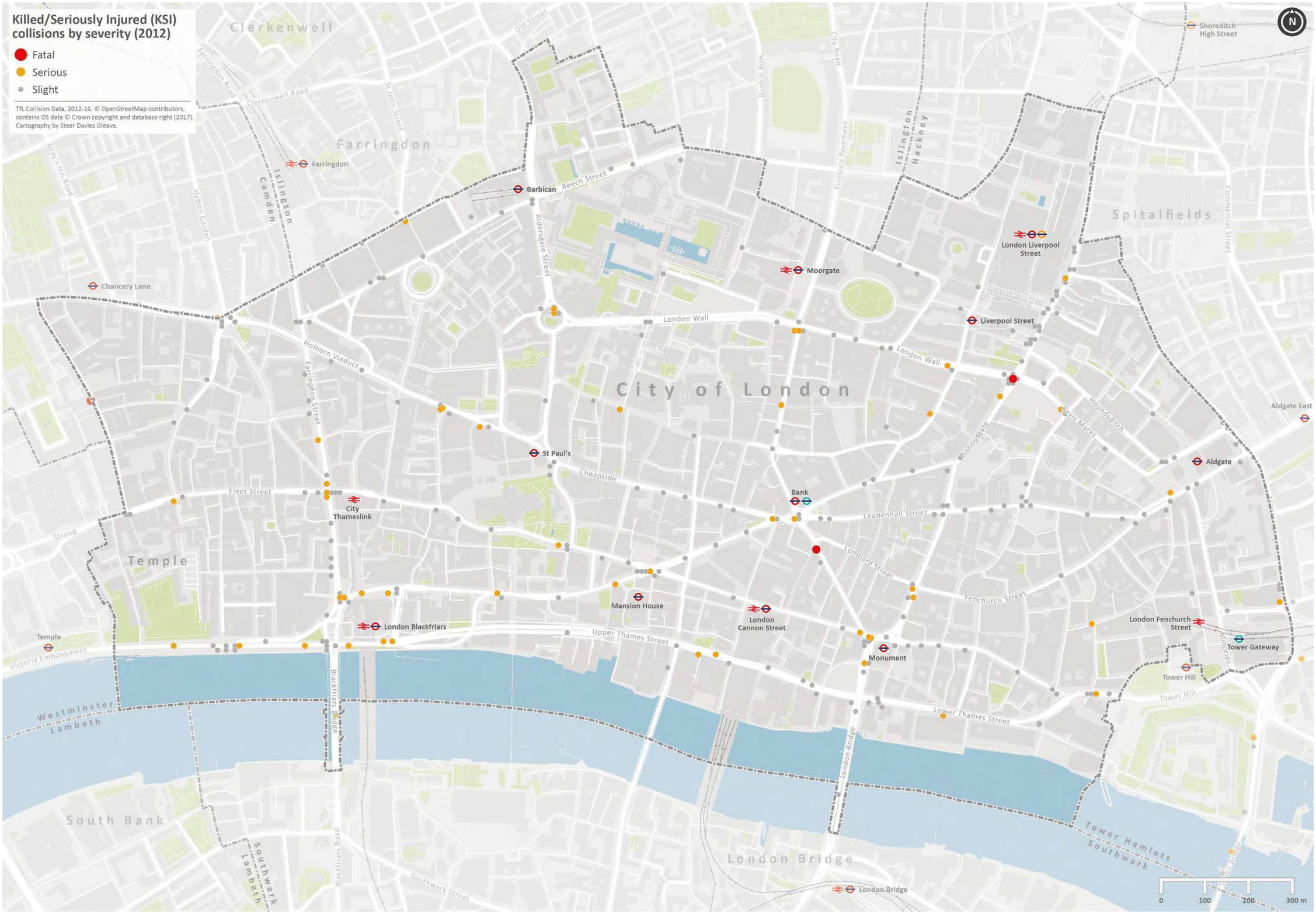
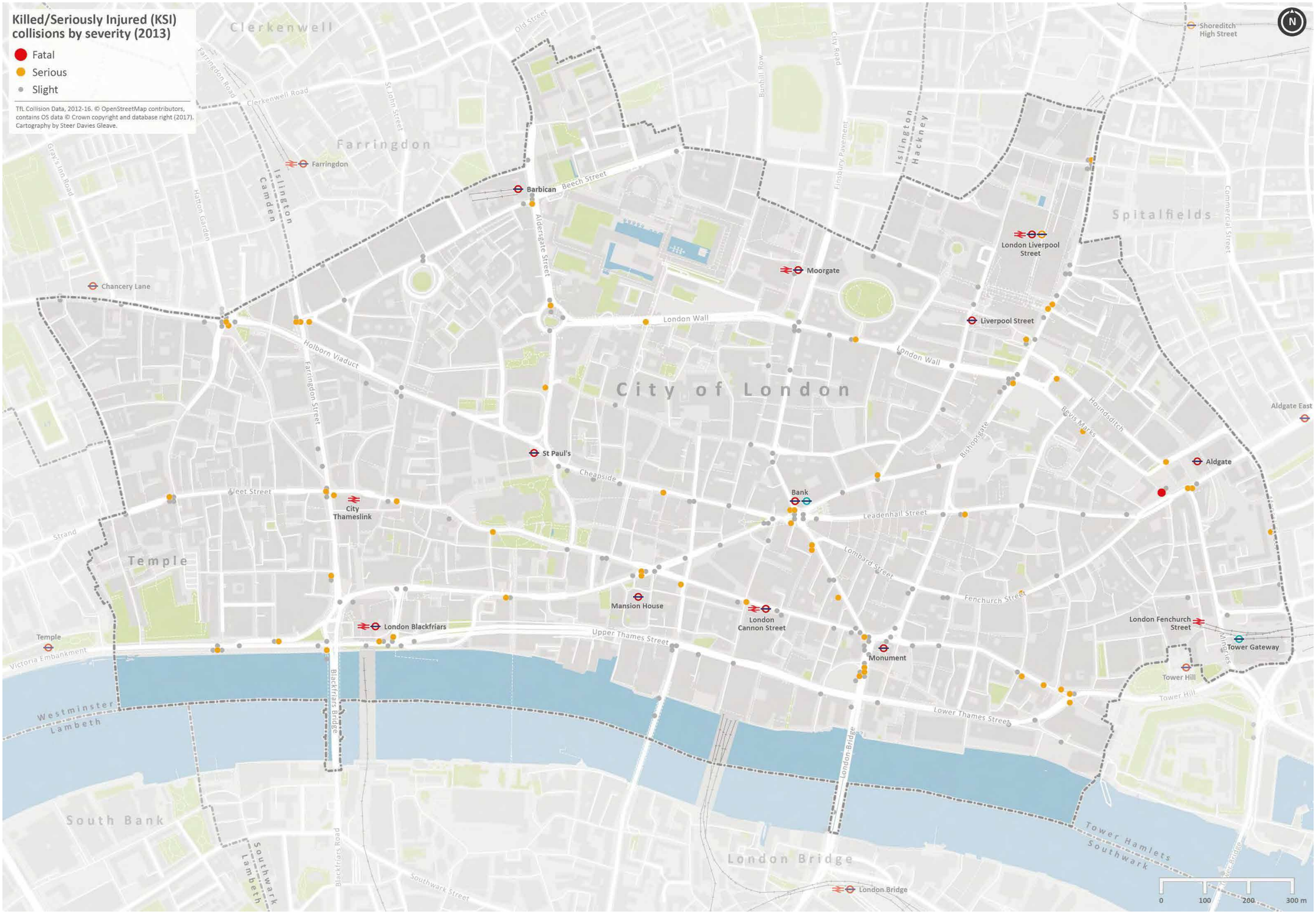
Tower Gateway
Tower Hill
Mansion House
London Cannon Street
Monument
Upper Thames Street
Lower Thames Street
London Blackfriars
Blackfriars Bridge
London Bridge
Southwark Street
Blackfriars Road
Southwark
Lambeth
Westminster
Tower Hamlets
Chancery Lane
Holborn Viaduct
Farringdon Street
Gray's Inn Road
Hatton Garden
Islington
Camden
Fleet Street
City Thameslink
St Paul's
Cheapside
Strand
Temple
Victoria Embankment
0
100
200
300 m

Appendix B

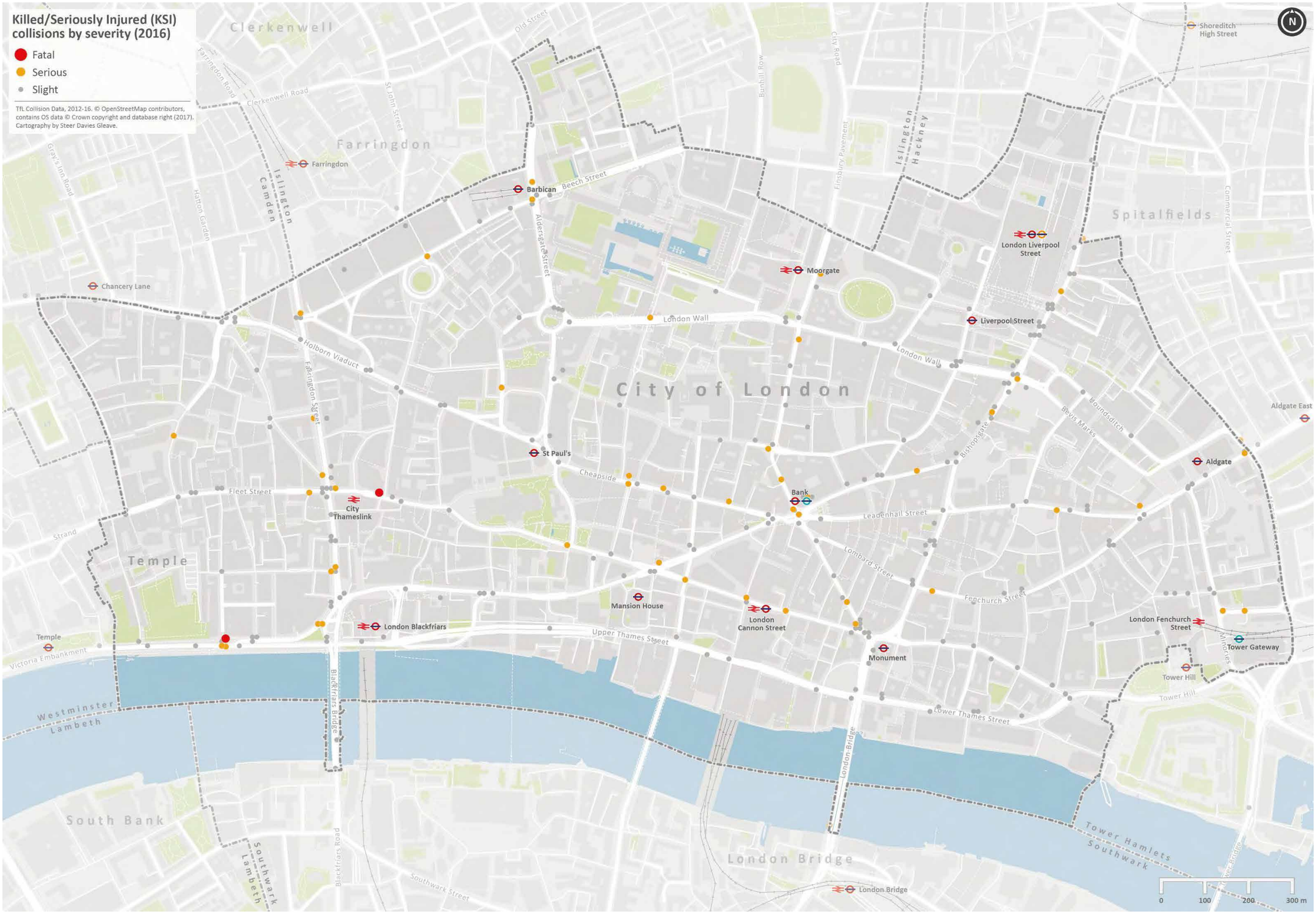
KSI collisions by year


Killed/Seriously Injured (KSI) collisions by severity (2012)
Fatal
Serious
Slight
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
Clerkenwell
Farringdon
City of London
Spitalfields
Temple
South Bank
London Bridge
Westminster
Lambeth
Tower Hamlets
Southwark
Old Street
Clerkenwell Road
Farringdon Road
St John Street
Gray's Inn Road
Hatton Garden
Islington
Camden
Farringdon
Barbican
Beech Street
Aldersgate Street
Bunhill Row
City Road
Finsbury Pavement
Islington
Hackney
Shoreditch High Street
Commercial Street
London Liverpool Street
Moorgate
Liverpool Street
London Wall
Chancery Lane
Holborn Viaduct
Farringdon Street
St Paul's
Cheapside
Bank
Leadenhall Street
Lombard Street
Fenchurch Street
Bishopsgate
Houndsditch
Bevis Marks
Aldgate East
Aldgate
Fleet Street
City Thameslink
Strand
Temple
Victoria Embankment
London Blackfriars
Mansion House
London Cannon Street
Upper Thames Street
Monument
London Fenchurch Street
Tower Gateway
Minories
Tower Hill
Lower Thames Street
Blackfriars Bridge
Blackfriars Road
Southwark Street
London Bridge
Tower Bridge
0
100
200
300 m


Killed/Seriously Injured (KSI) collisions by severity (2013)
Fatal
Serious
Slight
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
N
Clerkenwell
Farringdon
Spitalfields
City of London
Temple
South Bank
Westminster
Lambeth
Southwark
London Bridge
Tower Hamlets
Old Street
Clerkenwell Road
Farringdon Road
St John Street
Bunhill Row
City Road
Finsbury Pavement
Islington
Hackney
Shoreditch High Street
Commercial Street
Gray's Inn Road
Hatton Garden
Islington
Camden
Farringdon
Barbican
Beech Street
Aldersgate Street
Moorgate
London Liverpool Street
Liverpool Street
Chancery Lane
Holborn Viaduct
Farringdon Street
London Wall
Bishopsgate
Houndsditch
Bevis Marks
Aldgate East
Aldgate
St Paul's
Cheapside
Bank
Leadenhall Street
Lombard Street
Fenchurch Street
Fleet Street
City Thameslink
Strand
Mansion House
London Cannon Street
London Fenchurch Street
Tower Gateway
Minories
Tower Hill
Temple
Victoria Embankment
London Blackfriars
Upper Thames Street
Monument
Lower Thames Street
Blackfriars Bridge
Blackfriars Road
London Bridge
Southwark Street
Southwark
Lambeth
0
100
200
300 m

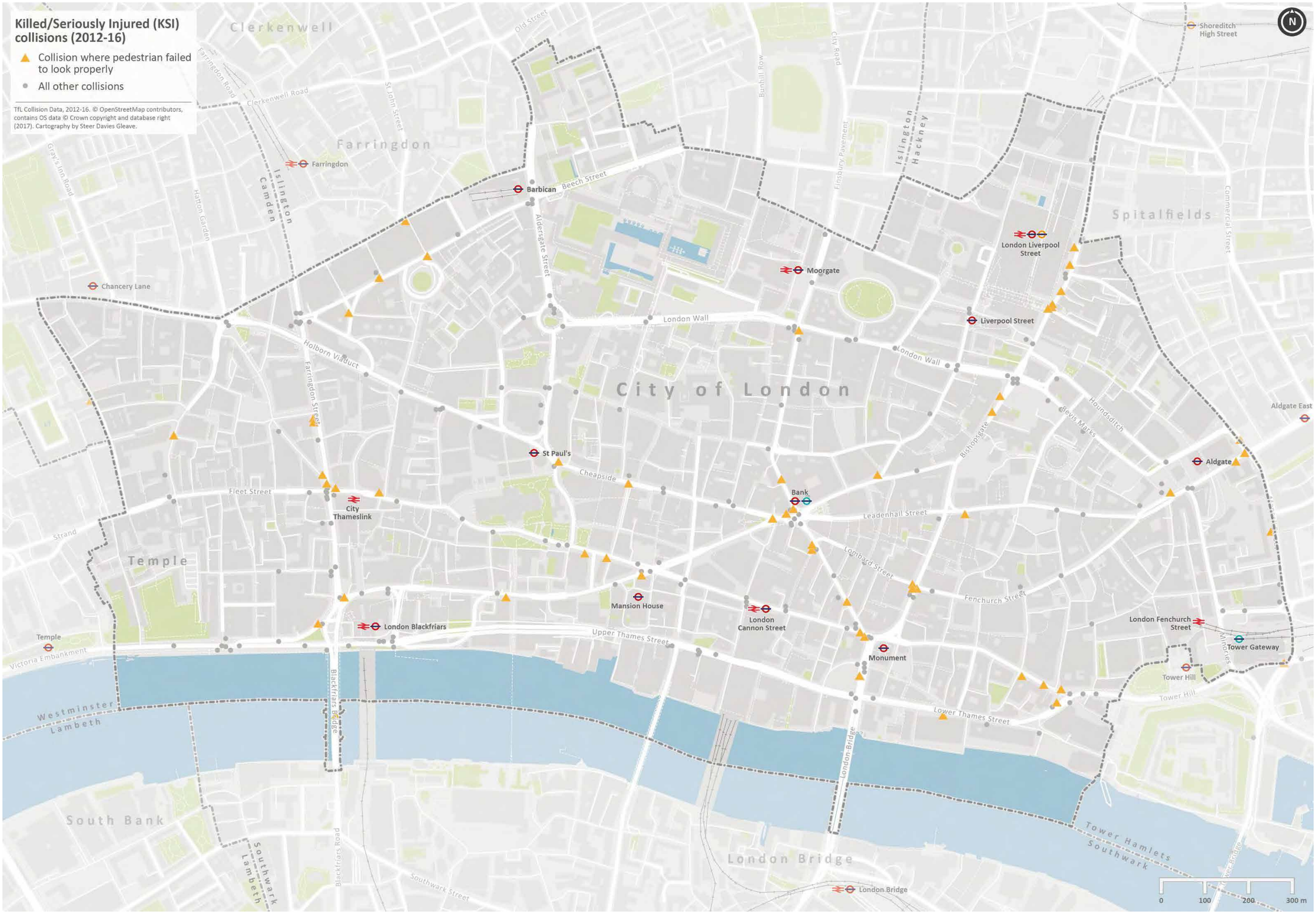

Killed/Seriously Injured (KSI) collisions by severity (2014)
Fatal
Serious
Slight
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
Clerkenwell
Farringdon
Spitalfields
City of London
Temple
South Bank
London Bridge
Westminster
Lambeth
Southwark
Tower Hamlets
Old Street
Clerkenwell Road
Farringdon Road
St John Street
Bunhill Row
City Road
Finsbury Pavement
Islington
Hackney
Commercial Street
Gray's Inn Road
Hatton Garden
Islington
Camden
Beech Street
Aldersgate Street
London Wall
Holborn Viaduct
Farringdon Street
Fleet Street
Strand
Victoria Embankment
Blackfriars Bridge
Blackfriars Road
Southwark Street
Cheapside
Leadenhall Street
Lombard Street
Fenchurch Street
Upper Thames Street
Lower Thames Street
London Bridge
Bishopsgate
Bevis Marks
Houndsditch
Minories
Tower Bridge
Farringdon
Barbican
Chancery Lane
Moorgate
London Liverpool Street
Liverpool Street
Shoreditch High Street
Aldgate East
Aldgate
St Paul's
City Thameslink
Bank
Mansion House
London Cannon Street
London Blackfriars
Temple
Monument
London Fenchurch Street
Tower Gateway
Tower Hill
N
0
100
200
300 m


Killed/Seriously Injured (KSI) collisions by severity (2015)
Fatal
Serious
Slight
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
Clerkenwell
Farringdon
Spitalfields
City of London
Temple
South Bank
London Bridge
Westminster
Lambeth
Southwark
Tower Hamlets
Old Street
Clerkenwell Road
Farringdon Road
St John Street
Gray's Inn Road
Hatton Garden
Islington
Camden
Farringdon
Barbican
Beech Street
Aldersgate Street
Bunhill Row
City Road
Finsbury Pavement
Islington
Hackney
Shoreditch High Street
Commercial Street
London Liverpool Street
Moorgate
Liverpool Street
London Wall
Chancery Lane
Holborn Viaduct
Farringdon Street
St Paul's
Cheapside
Houndsditch
Bevis Marks
Bishopsgate
Aldgate East
Aldgate
Bank
Leadenhall Street
Lombard Street
Fenchurch Street
Fleet Street
City Thameslink
Strand
Mansion House
London Cannon Street
London Blackfriars
Upper Thames Street
Monument
London Fenchurch Street
Minories
Tower Gateway
Tower Hill
Lower Thames Street
Temple
Victoria Embankment
Blackfriars Bridge
Blackfriars Road
Southwark Street
London Bridge
0
100
200
300 m


Killed/Seriously Injured (KSI) collisions by severity (2016)
Fatal
Serious
Slight
TfL Collision Data, 2012-16. © OpenStreetMap contributors, contains OS data © Crown copyright and database right (2017). Cartography by Steer Davies Gleave.
N
Clerkenwell
Farringdon
Spitalfields
City of London
Temple
South Bank
London Bridge
Westminster
Lambeth
Southwark
Tower Hamlets
Old Street
Clerkenwell Road
Farringdon Road
St John Street
Bunhill Row
City Road
Finsbury Pavement
Islington
Hackney
Commercial Street
Gray's Inn Road
Hatton Garden
Islington
Camden
Beech Street
Aldersgate Street
London Wall
Holborn Viaduct
Farringdon Street
Cheapside
Fleet Street
Strand
Victoria Embankment
Blackfriars Bridge
Blackfriars Road
Southwark Street
Upper Thames Street
Lower Thames Street
London Bridge
Leadenhall Street
Lombard Street
Fenchurch Street
Houndsditch
Bevis Marks
Bishopsgate
Minories
Tower Hill
Farringdon
Barbican
Chancery Lane
Moorgate
London Liverpool Street
Liverpool Street
Shoreditch High Street
Aldgate East
Aldgate
St Paul's
City Thameslink
Bank
Mansion House
London Cannon Street
Monument
London Blackfriars
Temple
London Fenchurch Street
Tower Gateway
0
100
200
300 m

Appendix C

Maps of contributing factors


Killed/Seriously Injured (KSI) collisions (2012-16)
Collision where pedestrian failed to look properly
All other collisions
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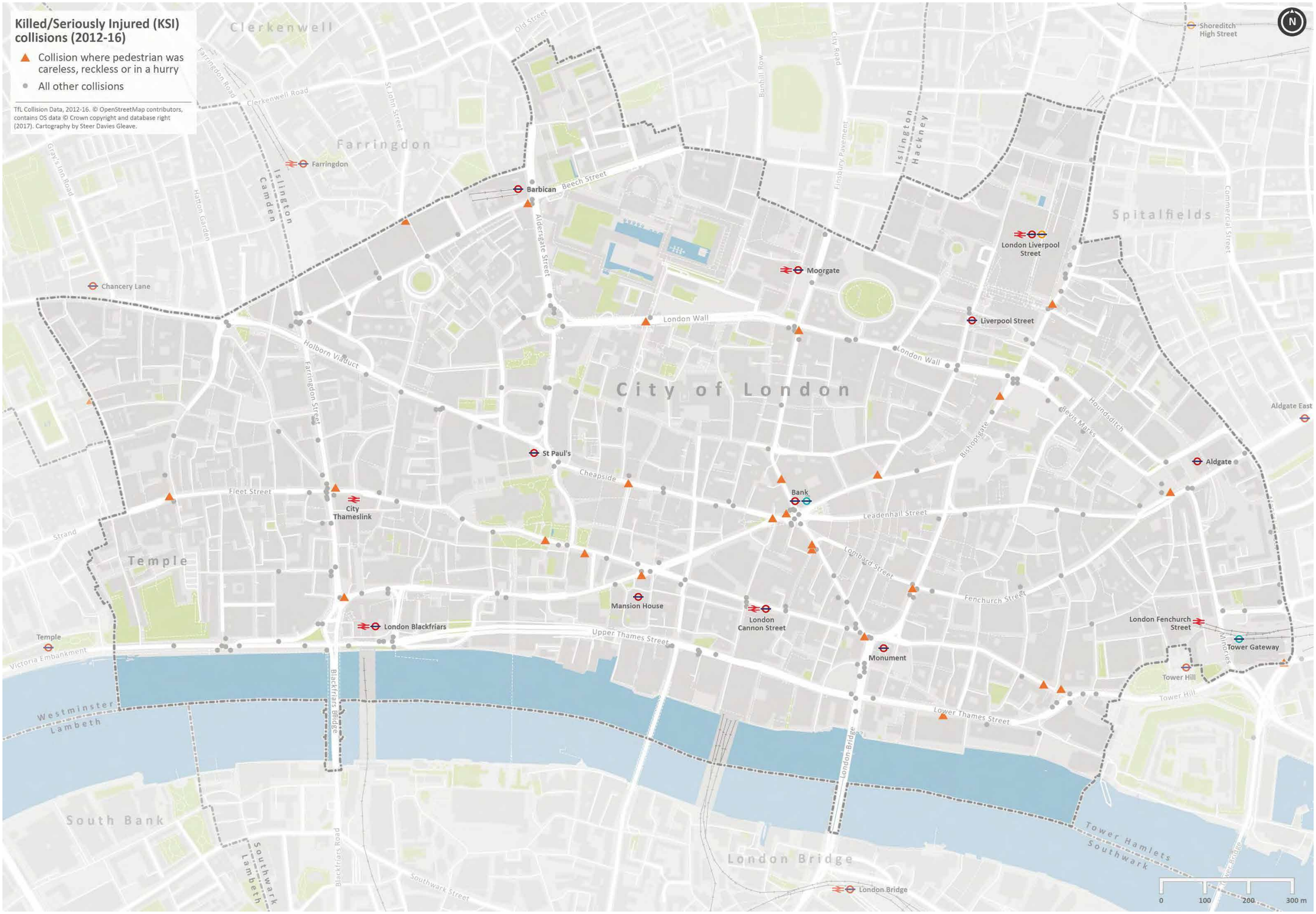
Killed/Seriously Injured (KSI) collisions (2012-16)
Collision where pedestrian was careless, reckless or in a hurry
All other collisions
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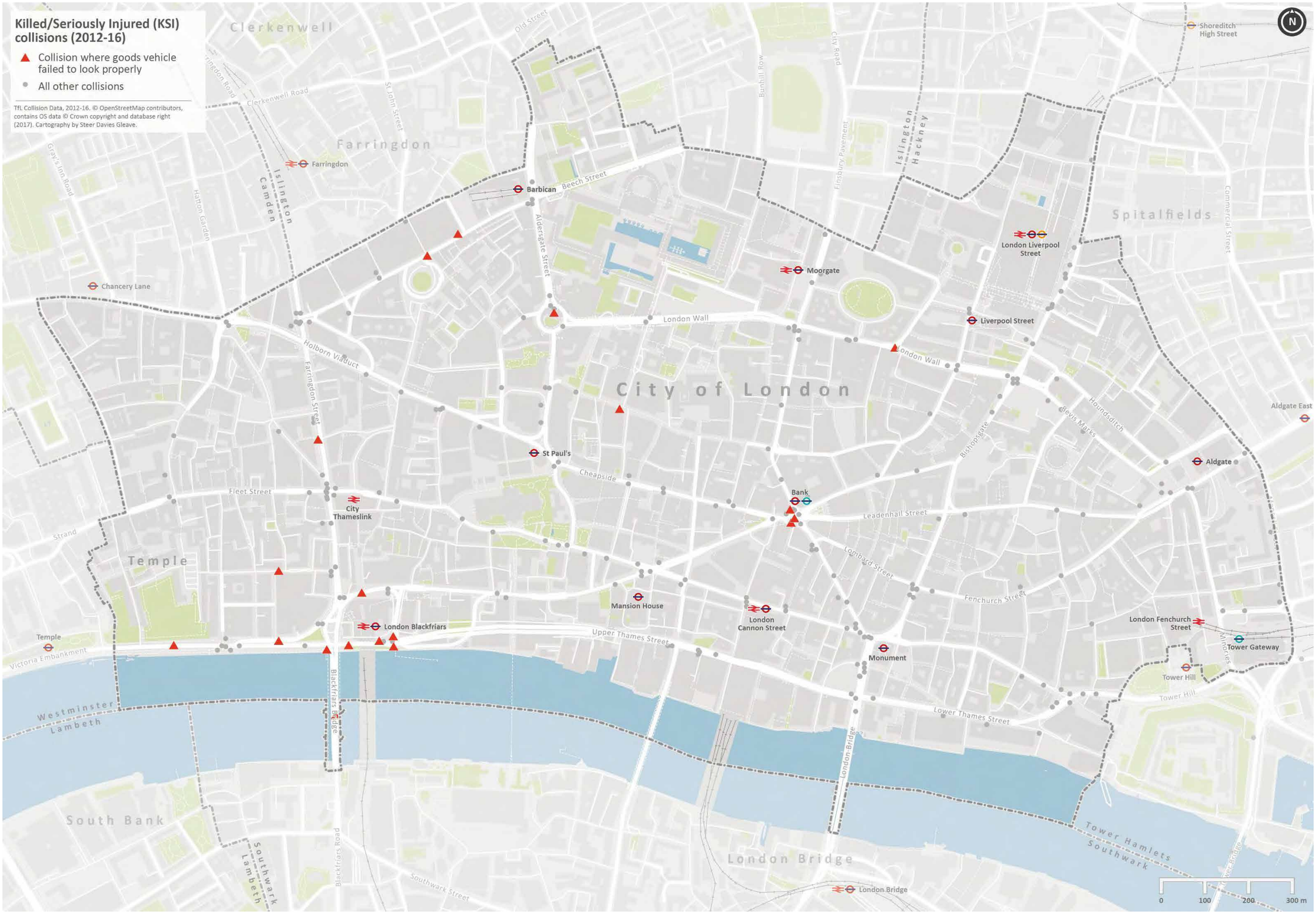
Killed/Seriously Injured (KSI) collisions (2012-16)
Collision where goods vehicle failed to look properly
All other collisions
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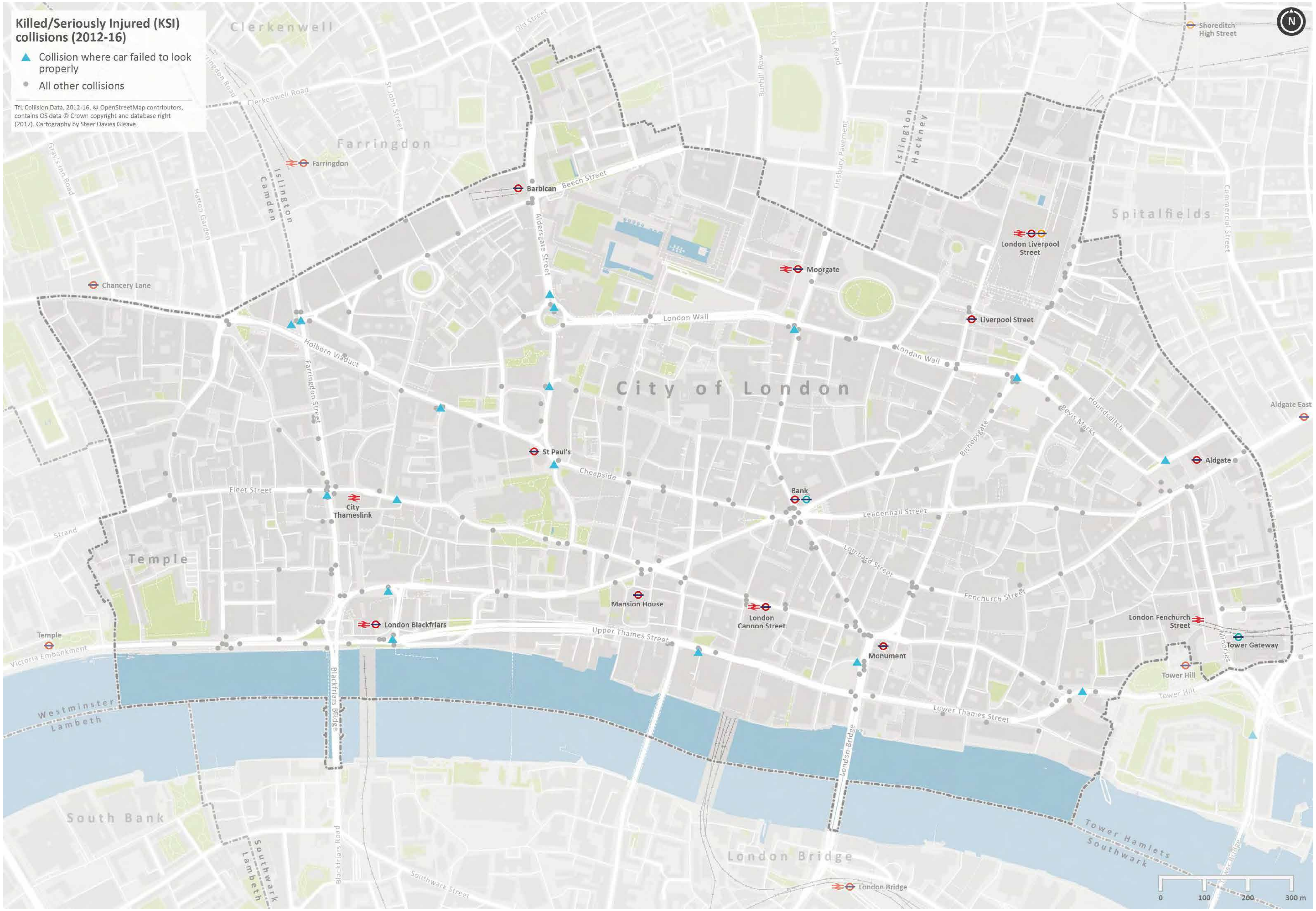

Killed/Seriously Injured (KSI) collisions (2012-16)
Collision where car failed to look properly
All other collisions
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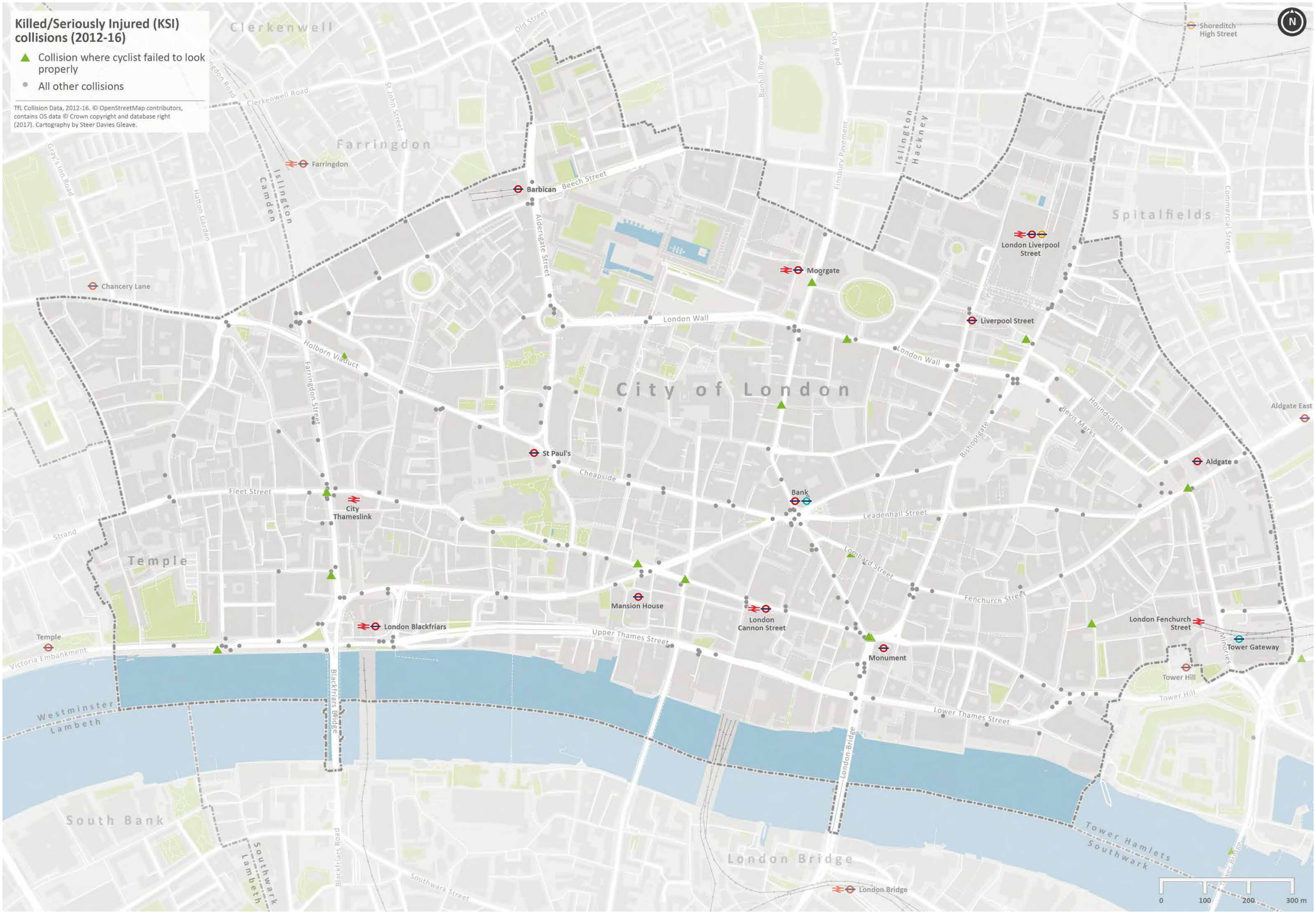
Killed/Seriously Injured (KSI) collisions (2012-16)
Collision where cyclist failed to look properly
All other collisions
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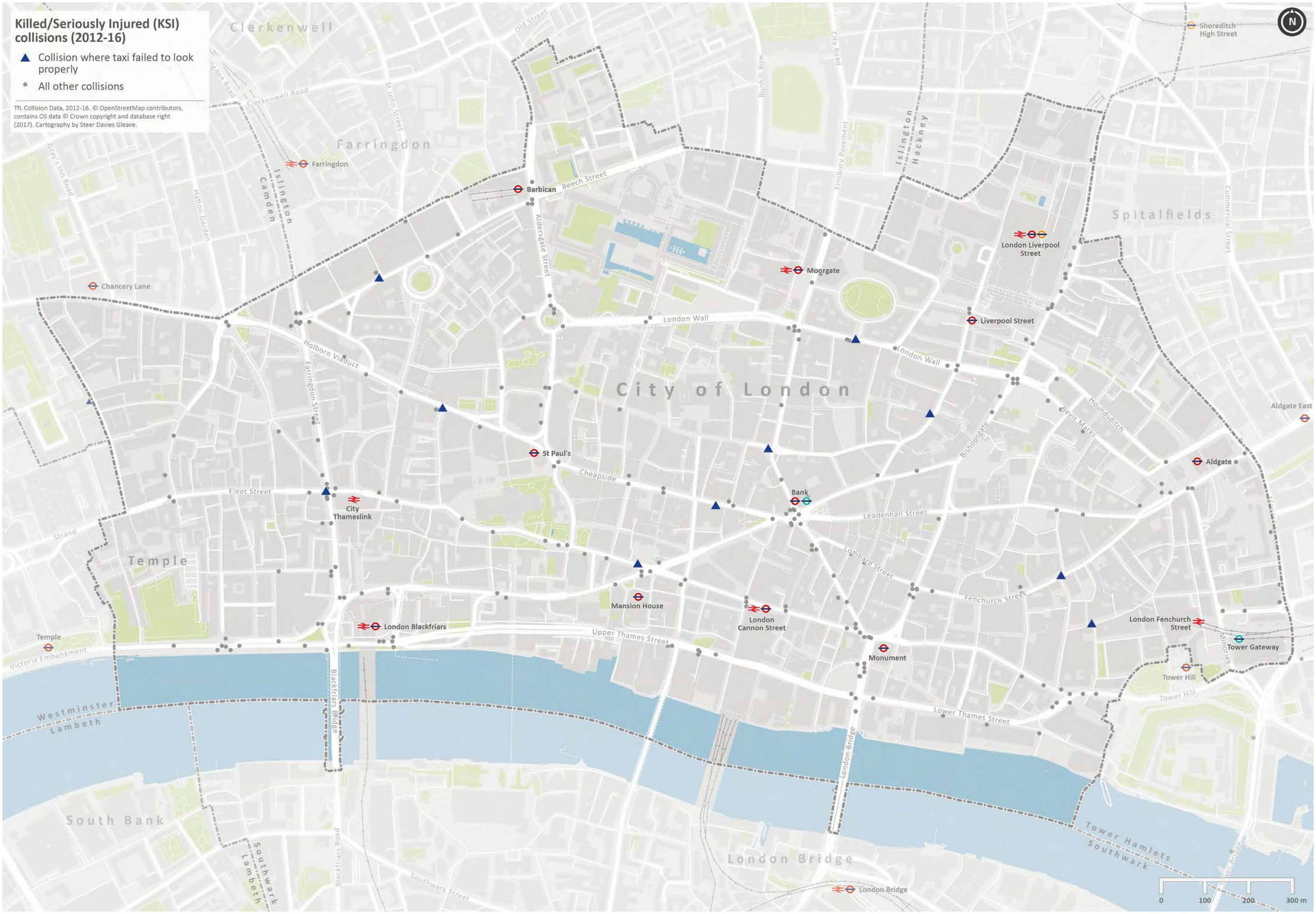
Killed/Seriously Injured (KSI) collisions (2012-16)
Collision where taxi failed to look properly
All other collisions
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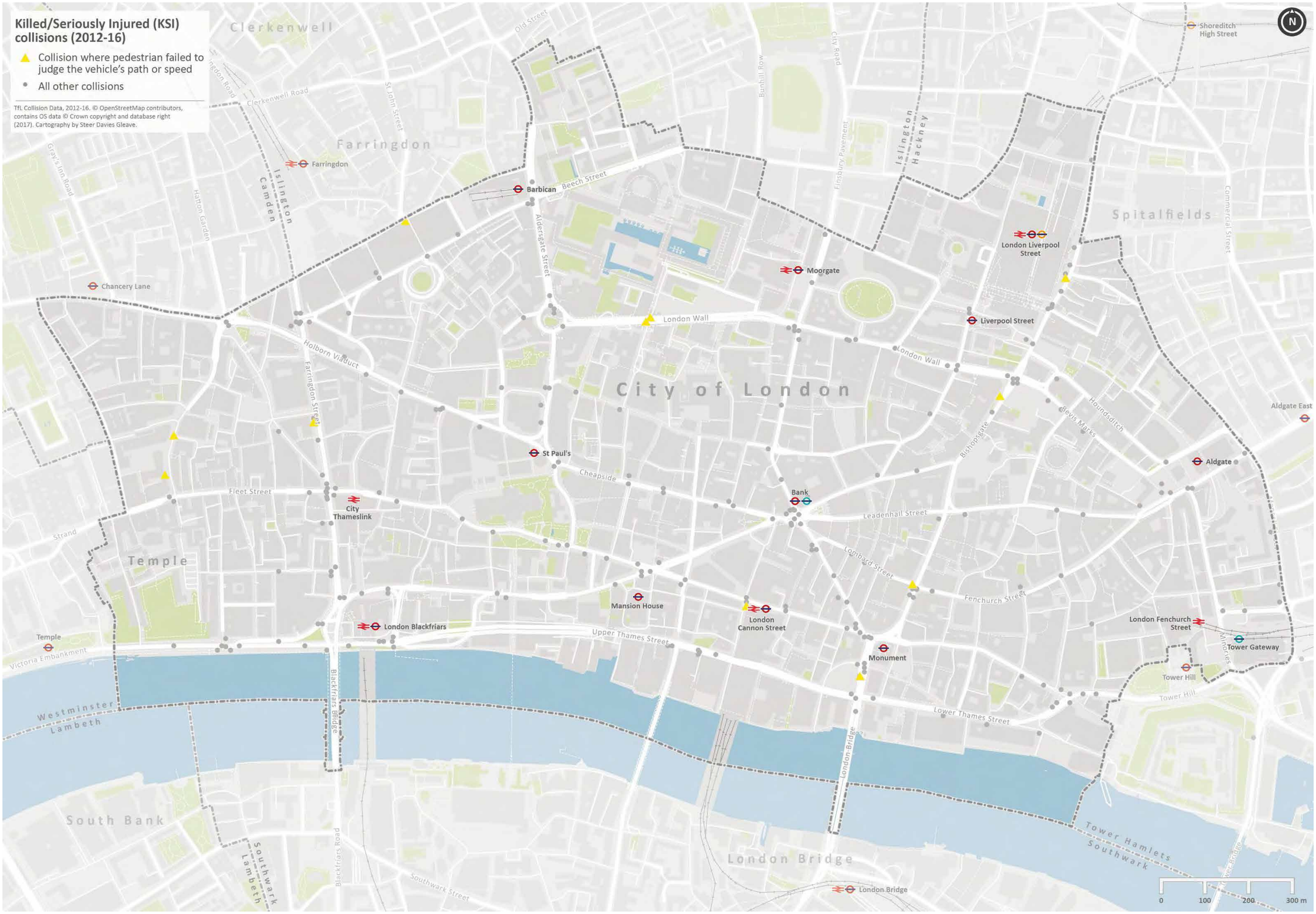
Killed/Seriously Injured (KSI) collisions (2012-16)
Collision where pedestrian failed to judge the vehicle's path or speed
All other collisions
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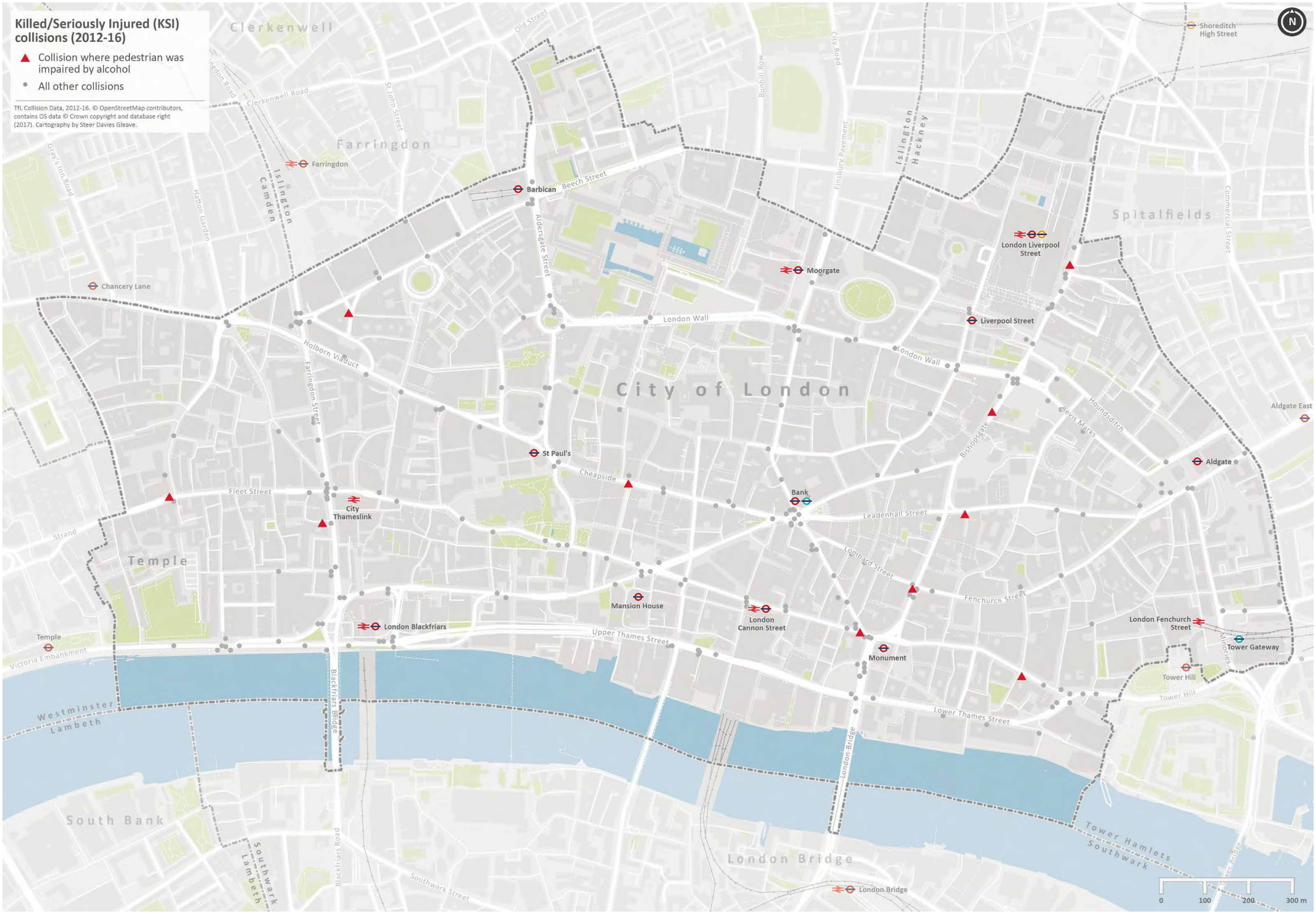
Killed/Seriously Injured (KSI) collisions (2012-16)
Collision where pedestrian was impaired by alcohol
All other collisions
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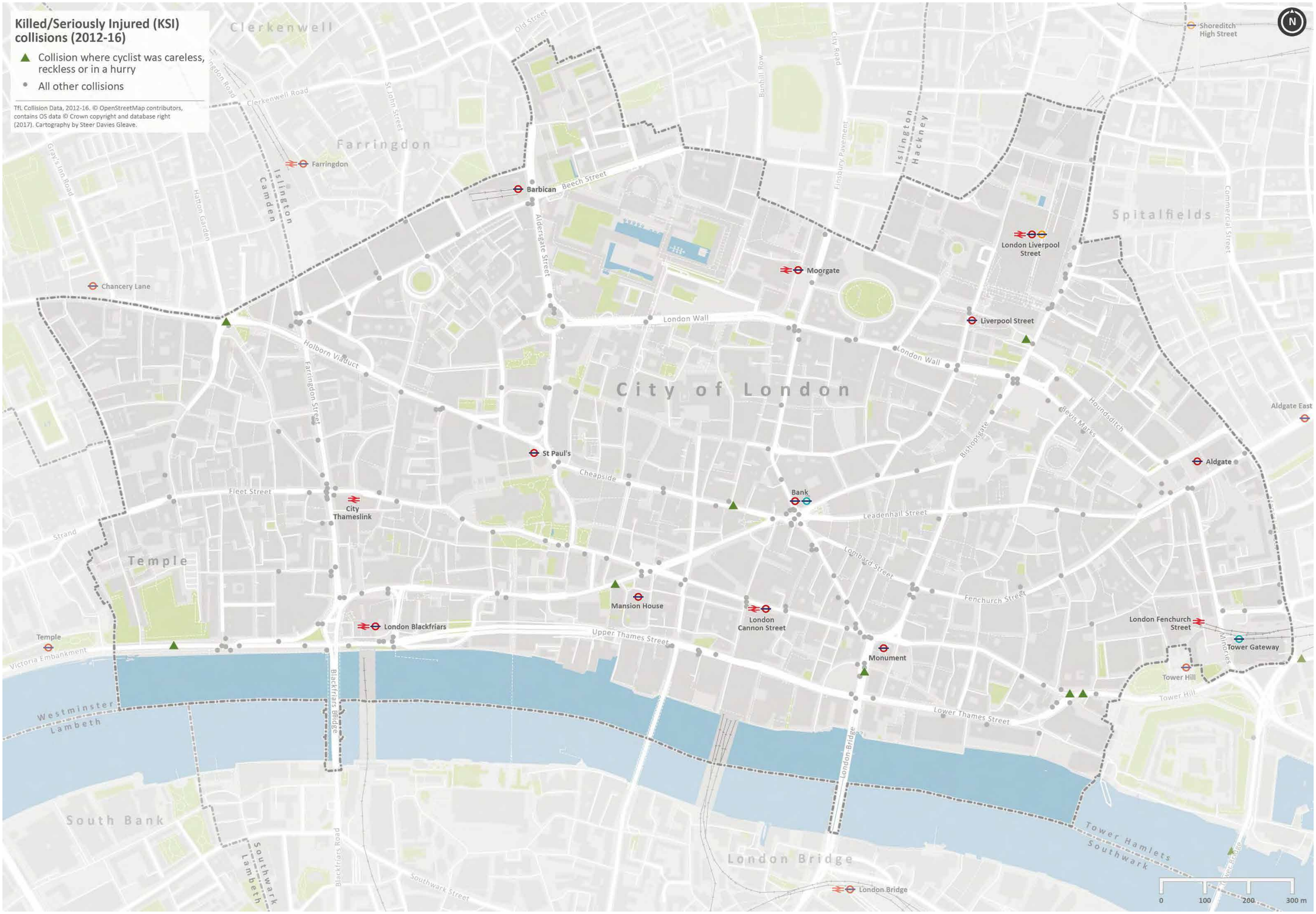
Killed/Seriously Injured (KSI) collisions (2012-16)
Collision where cyclist was careless, reckless or in a hurry
All other collisions
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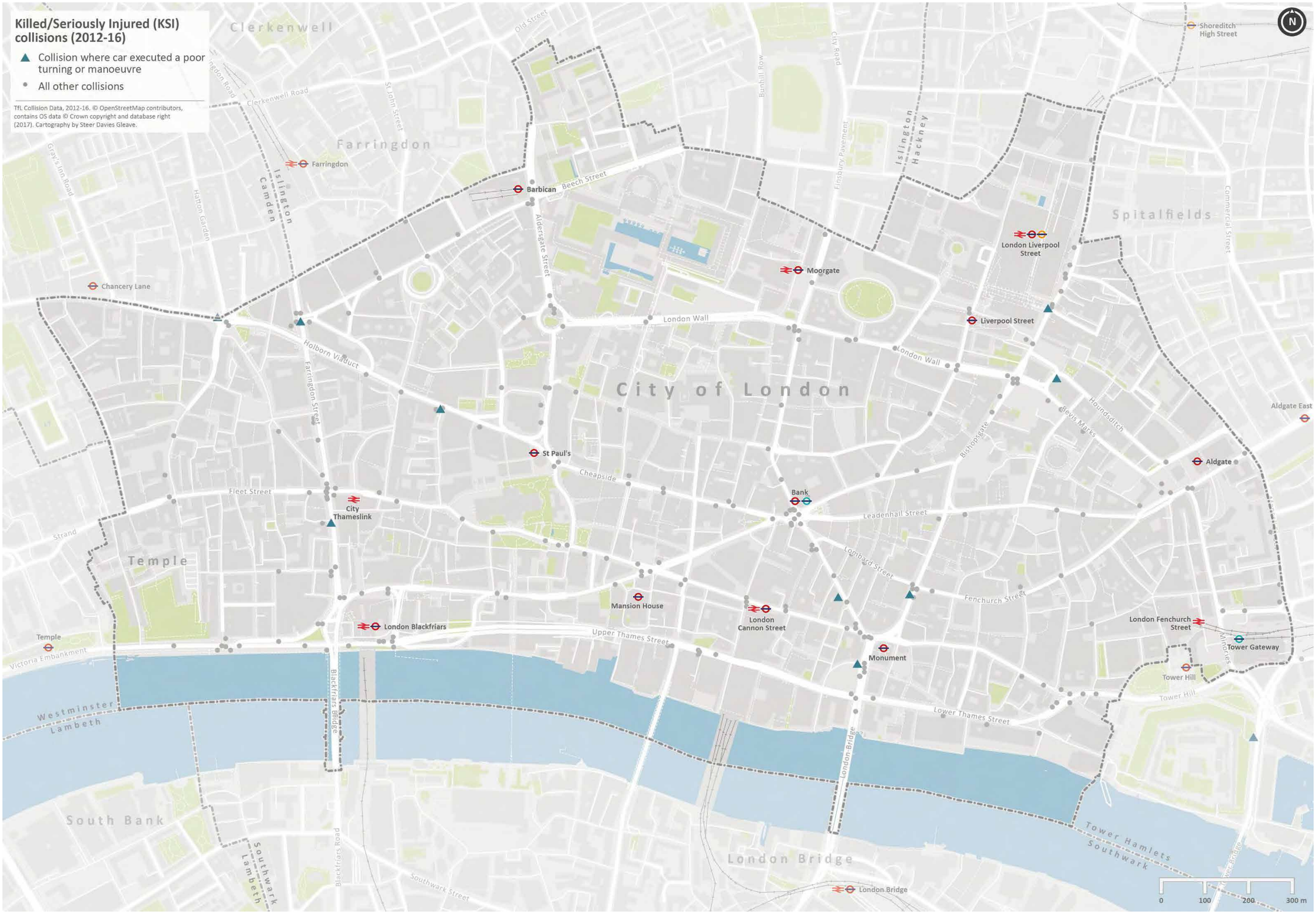
Killed/Seriously Injured (KSI) collisions (2012-16)
Collision where car executed a poor turning or manoeuvre
All other collisions
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