

Road Danger Reduction – City Etiquette Guide

Analysis of KSI collisions

City of London Corporation

September 2017

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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)

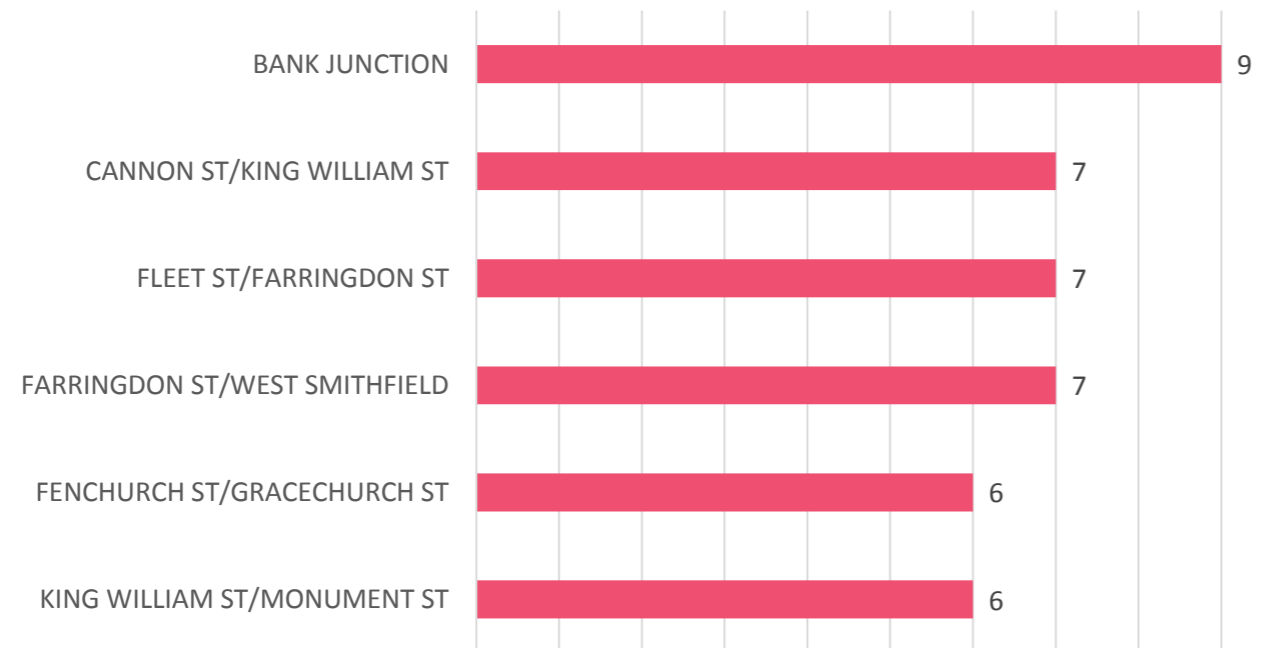
- It is too early to measure the impact of the opening of North-South and East-West Cycle Superhighways (April-May 2016) but a few provisional considerations can be made.
- Whilst the overall number of collisions involving cyclists has decreased from 2015 to 2016, the number of collisions occurring along 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

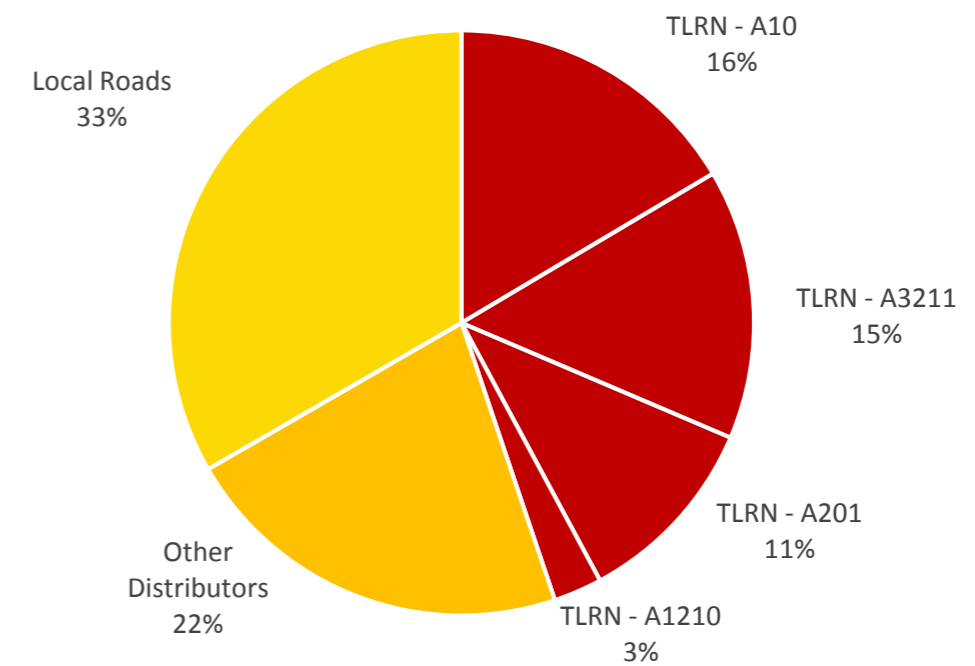
Killed/Seriously Injured (KSI) collisions – General Statistics

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

Main Collision Hotspots
(based on TfL node assignment)



KSI Collisions by Road Class



Lighting conditions



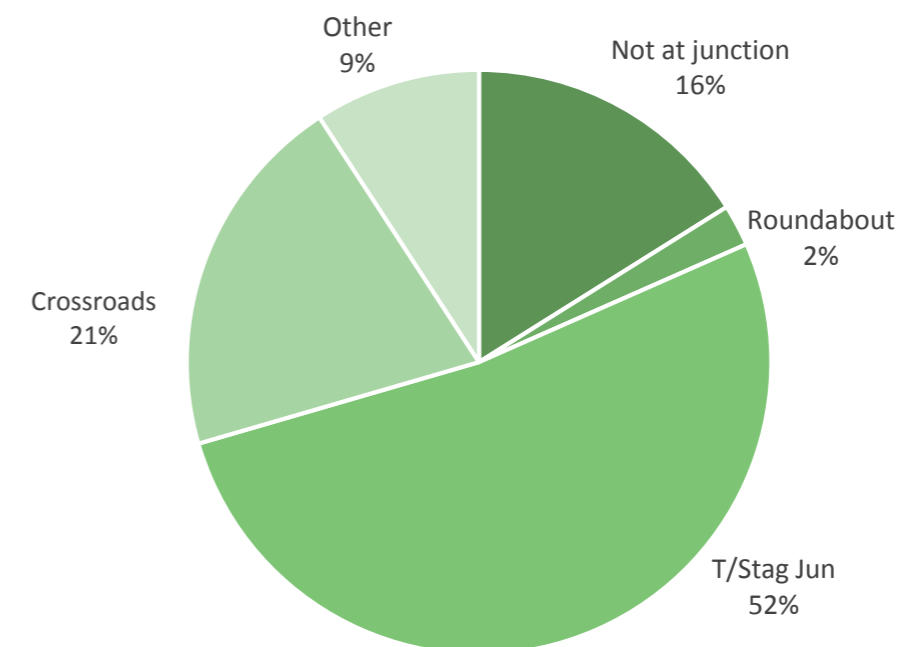
Road Surface

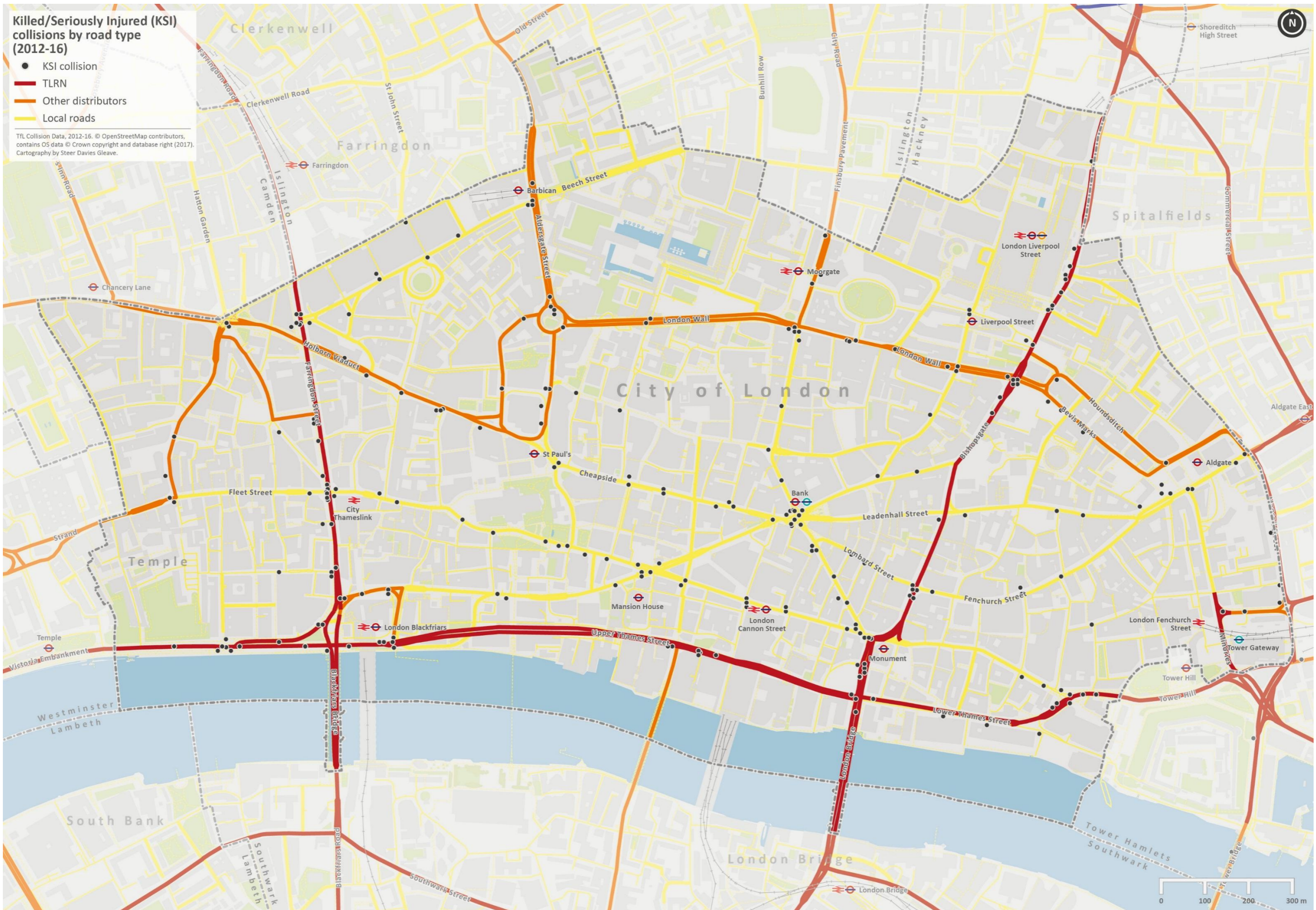


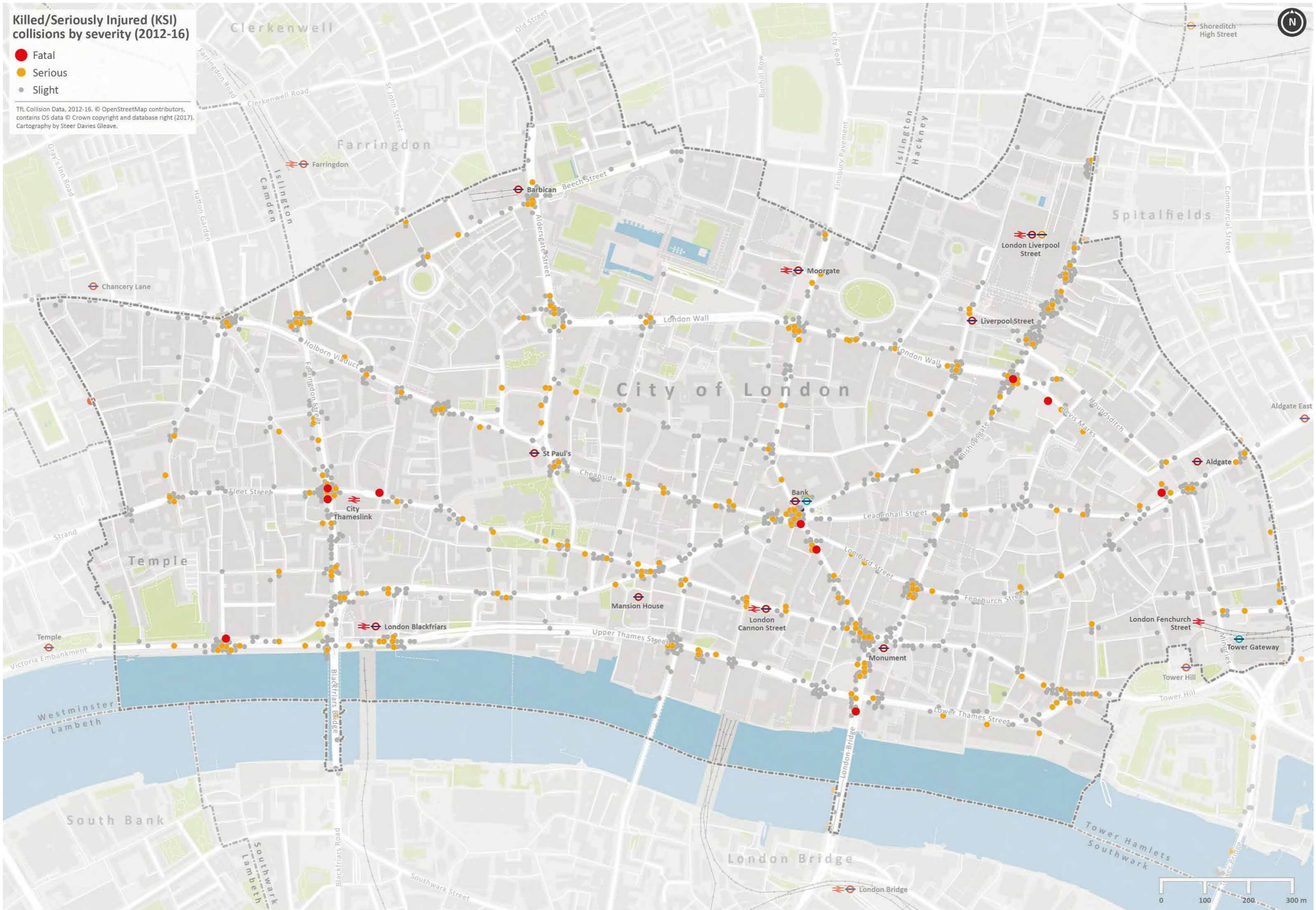
Involved road users' age

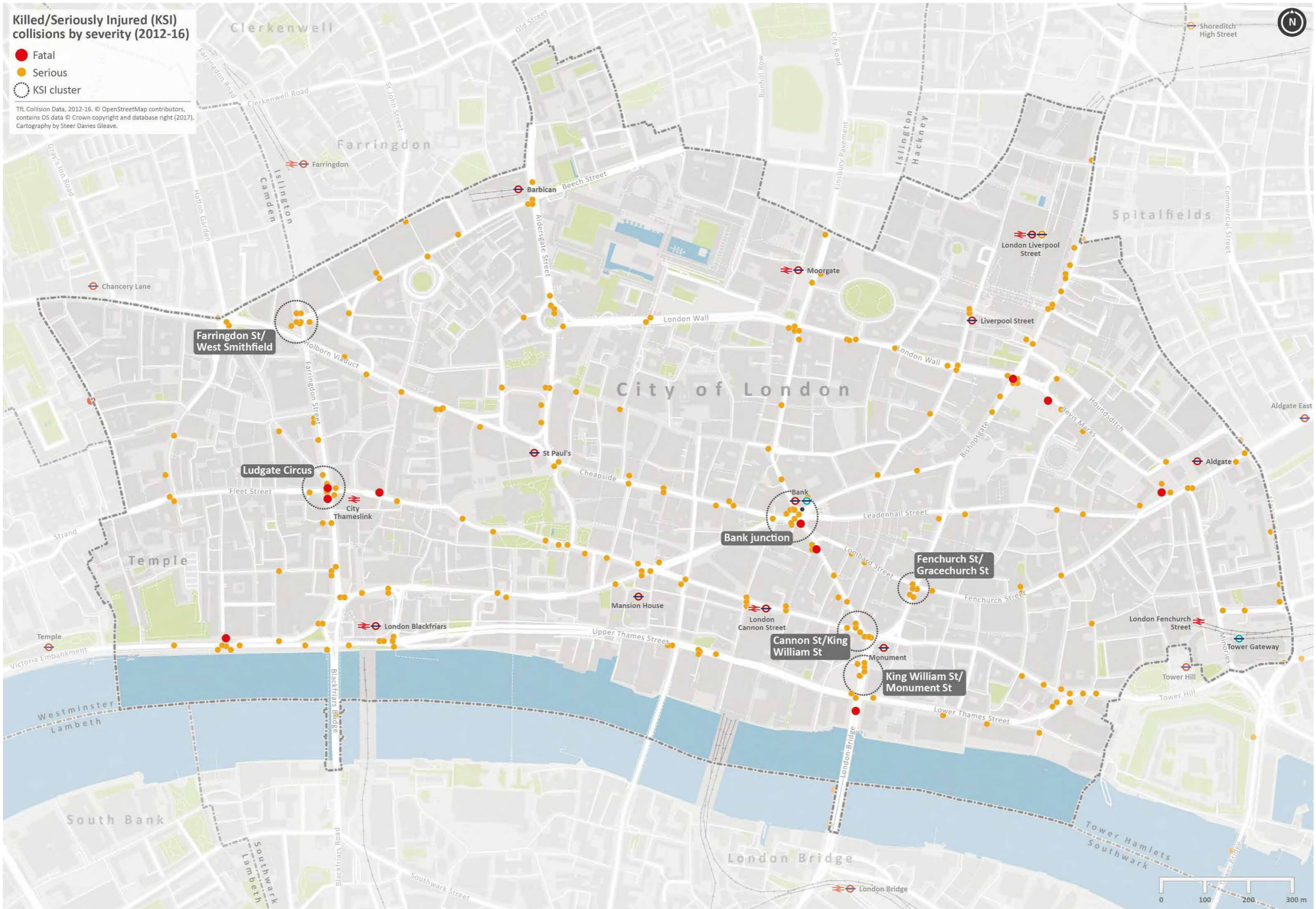


KSI Collisions by Road Layout





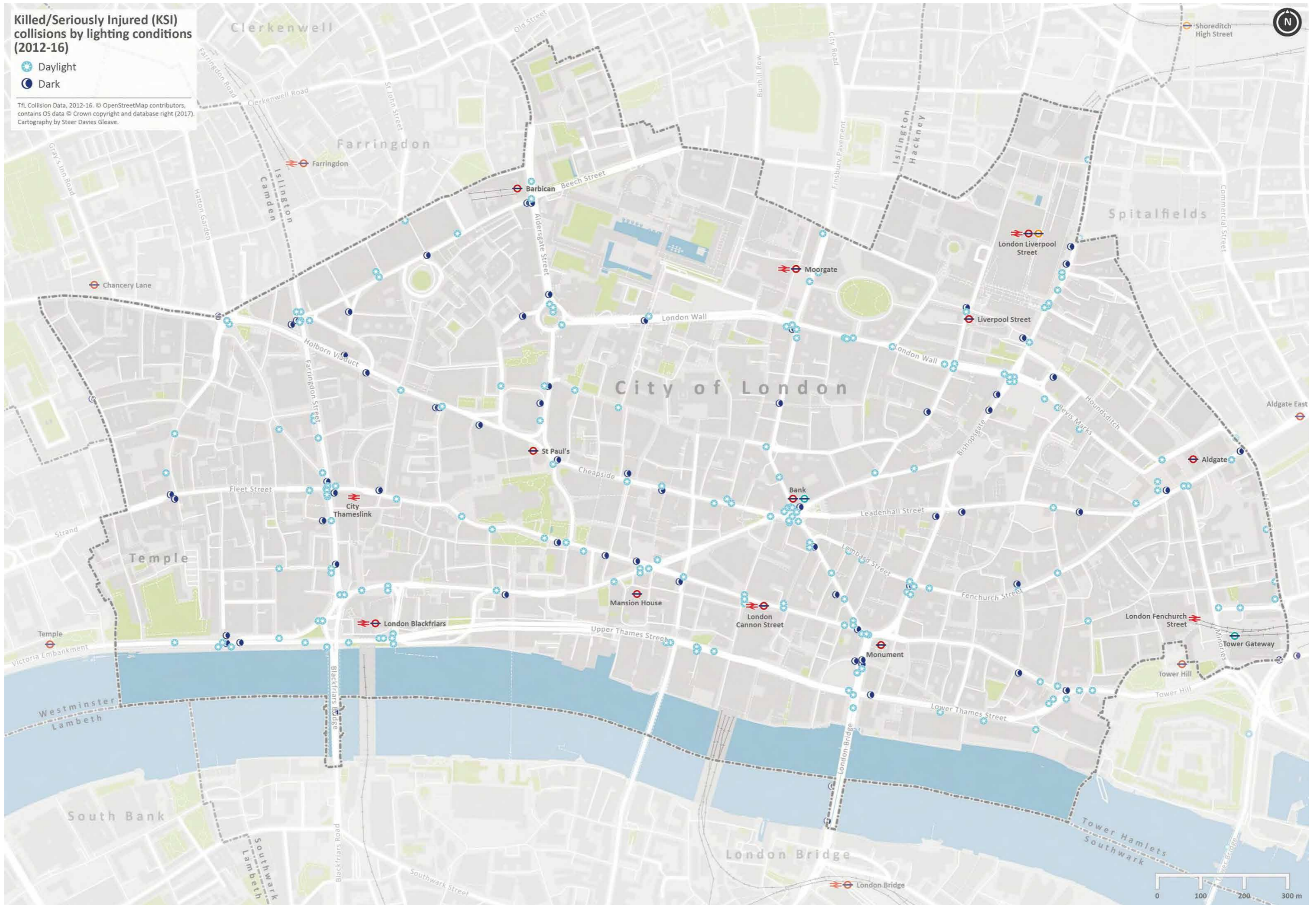




Killed/Seriously Injured (KSI) collisions by lighting conditions (2012-16)

-  Daylight
-  Dark

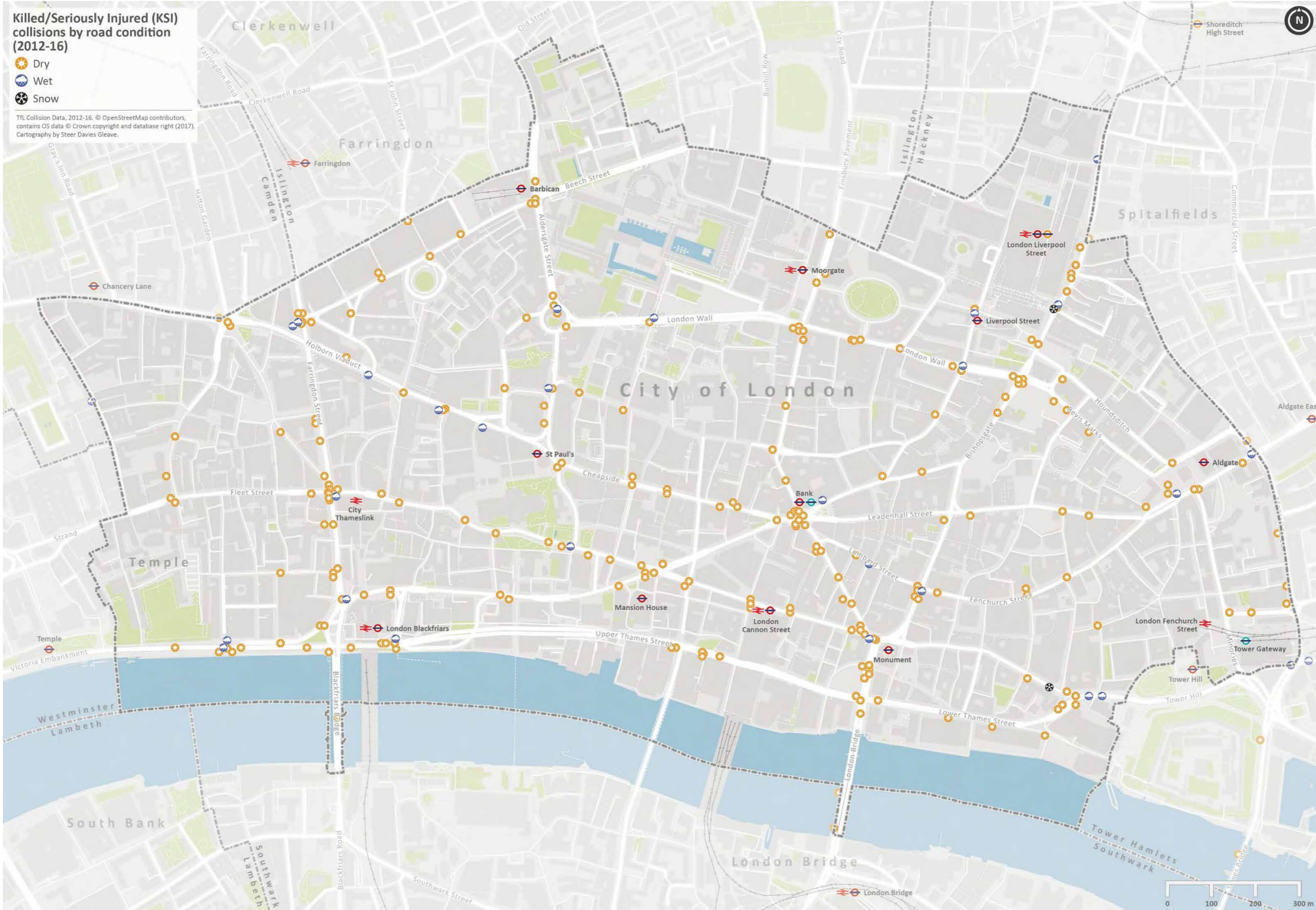
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Killed/Seriously Injured (KSI) collisions by road condition (2012-16)

-  Dry
-  Wet
-  Snow

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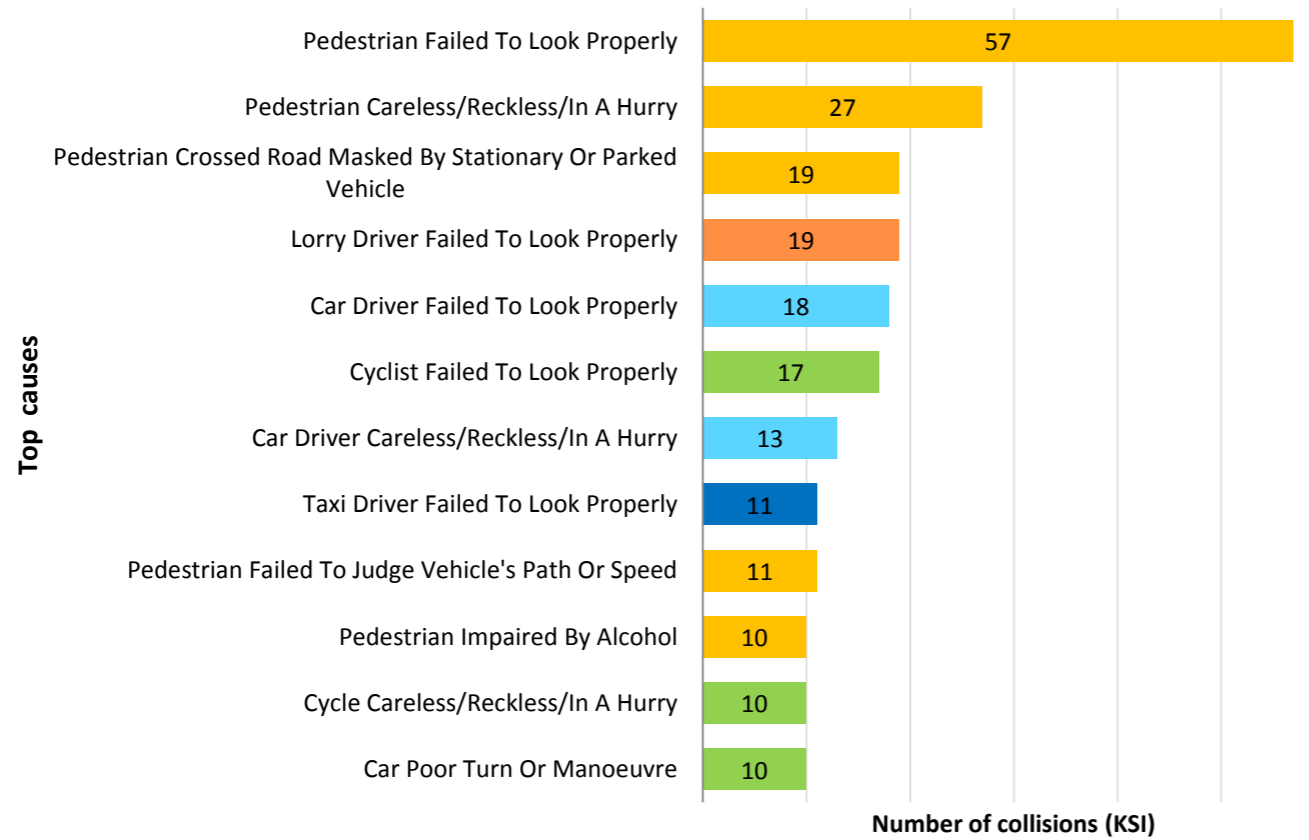
Contributing Factors and Modes Involved

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

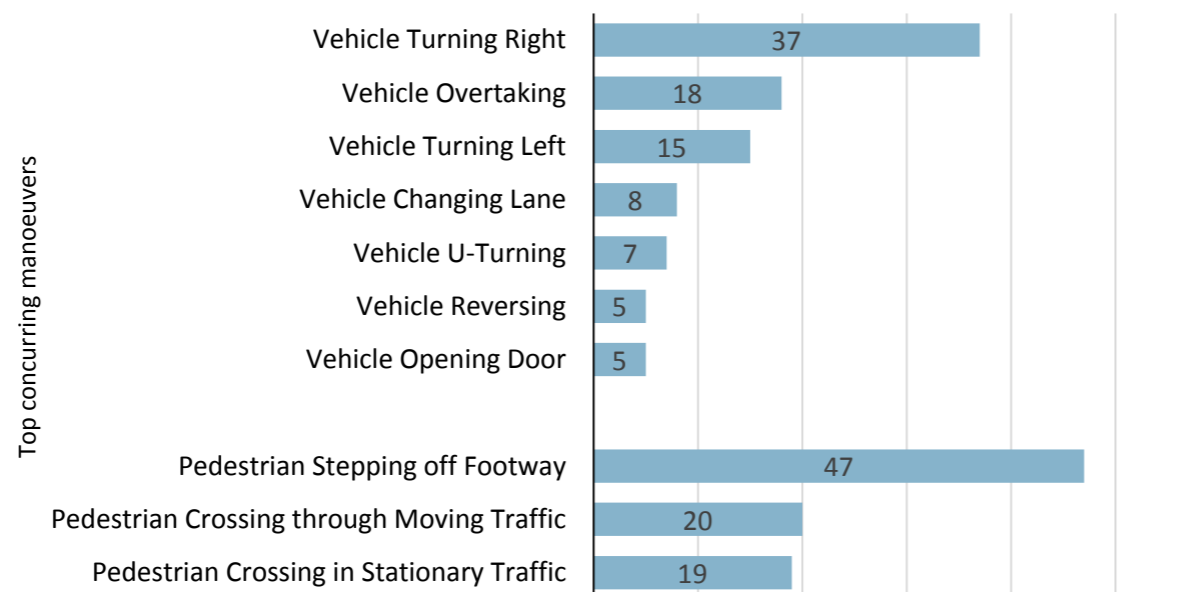
Most frequent contributing factors

(more than one factor can contribute to each collision)



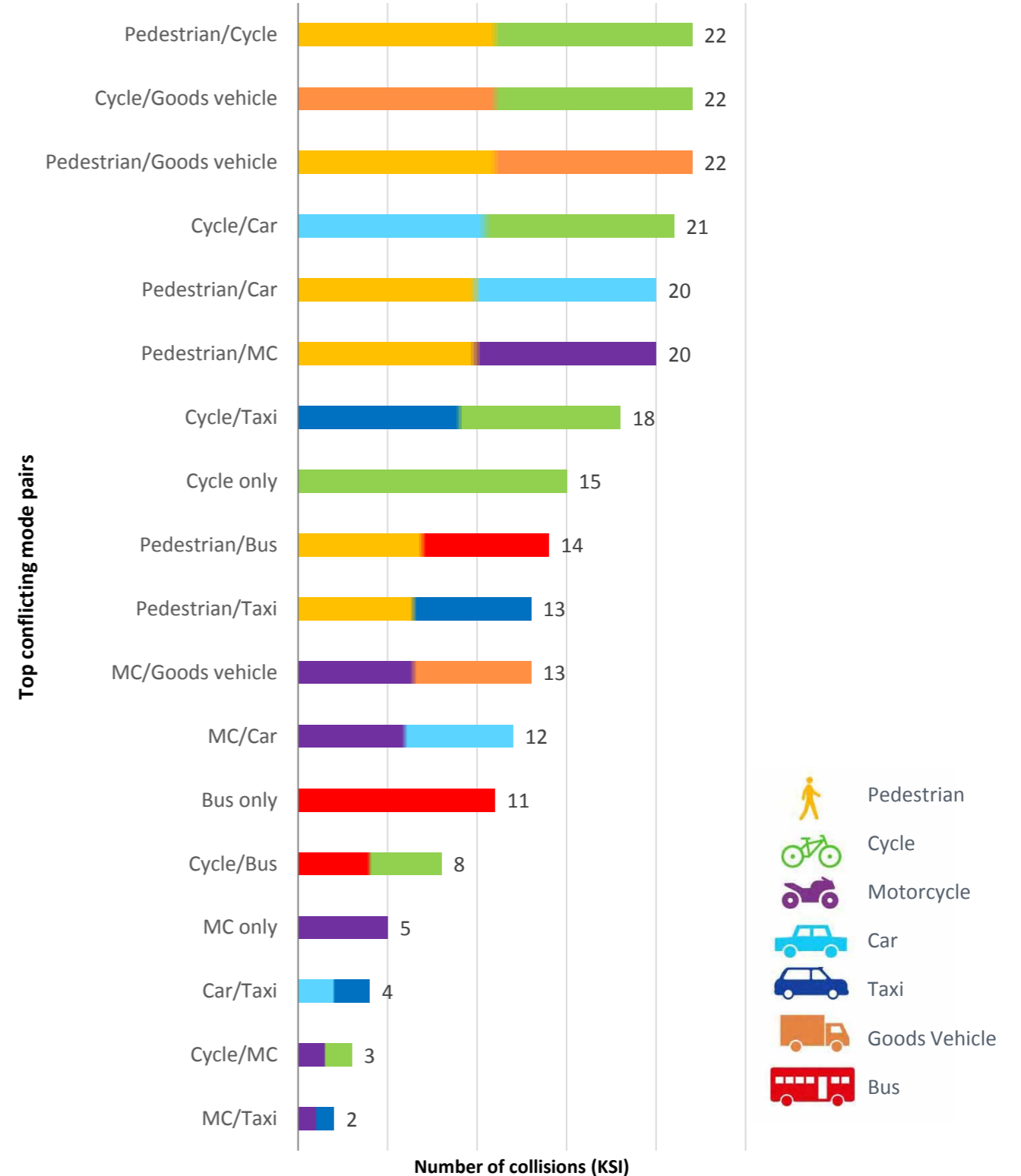
Most frequent concurring manoeuvres

(more than one can contribute to each collision)



Most frequent conflicting pairs

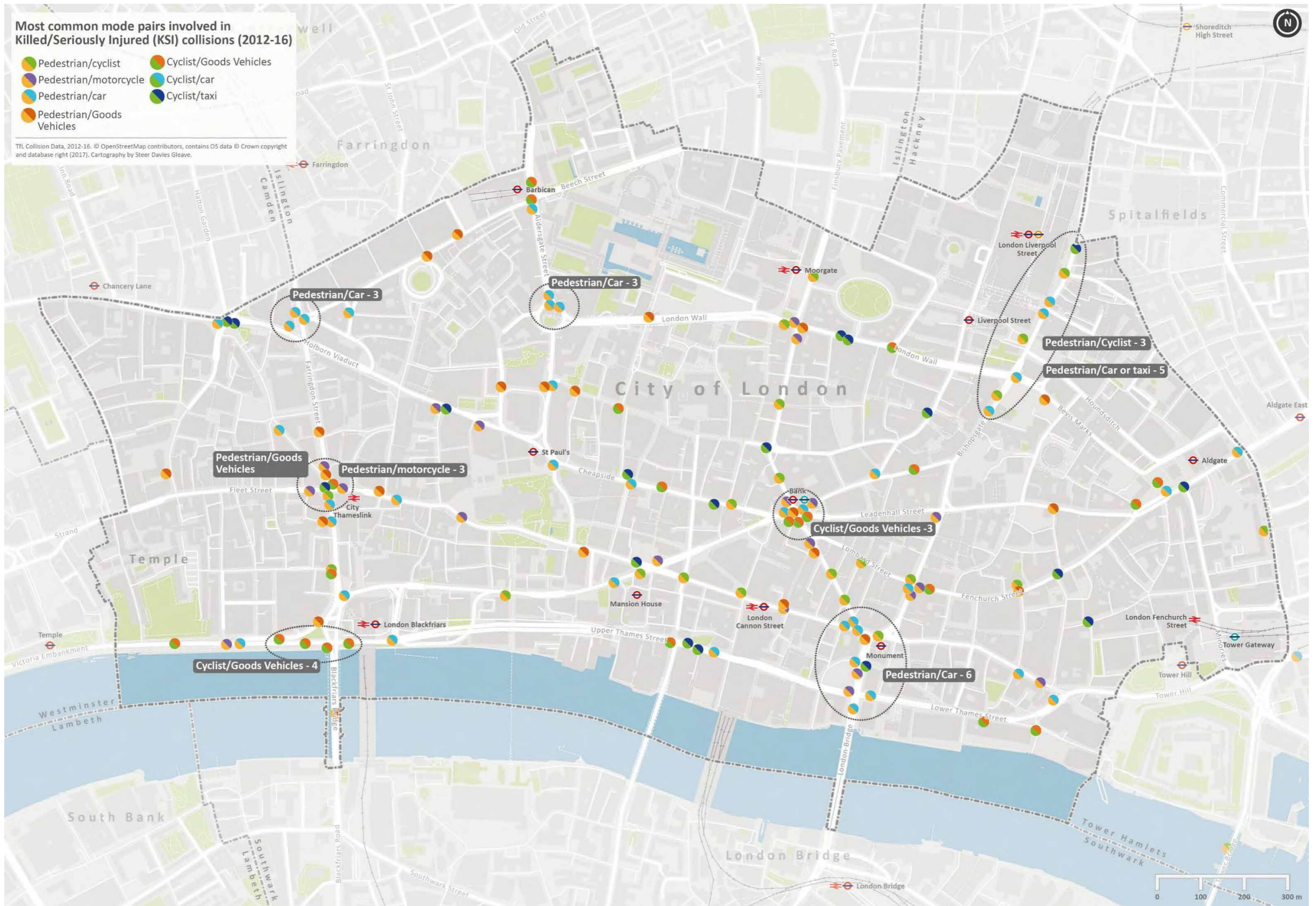
(more than one vehicle per mode can be involved)



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

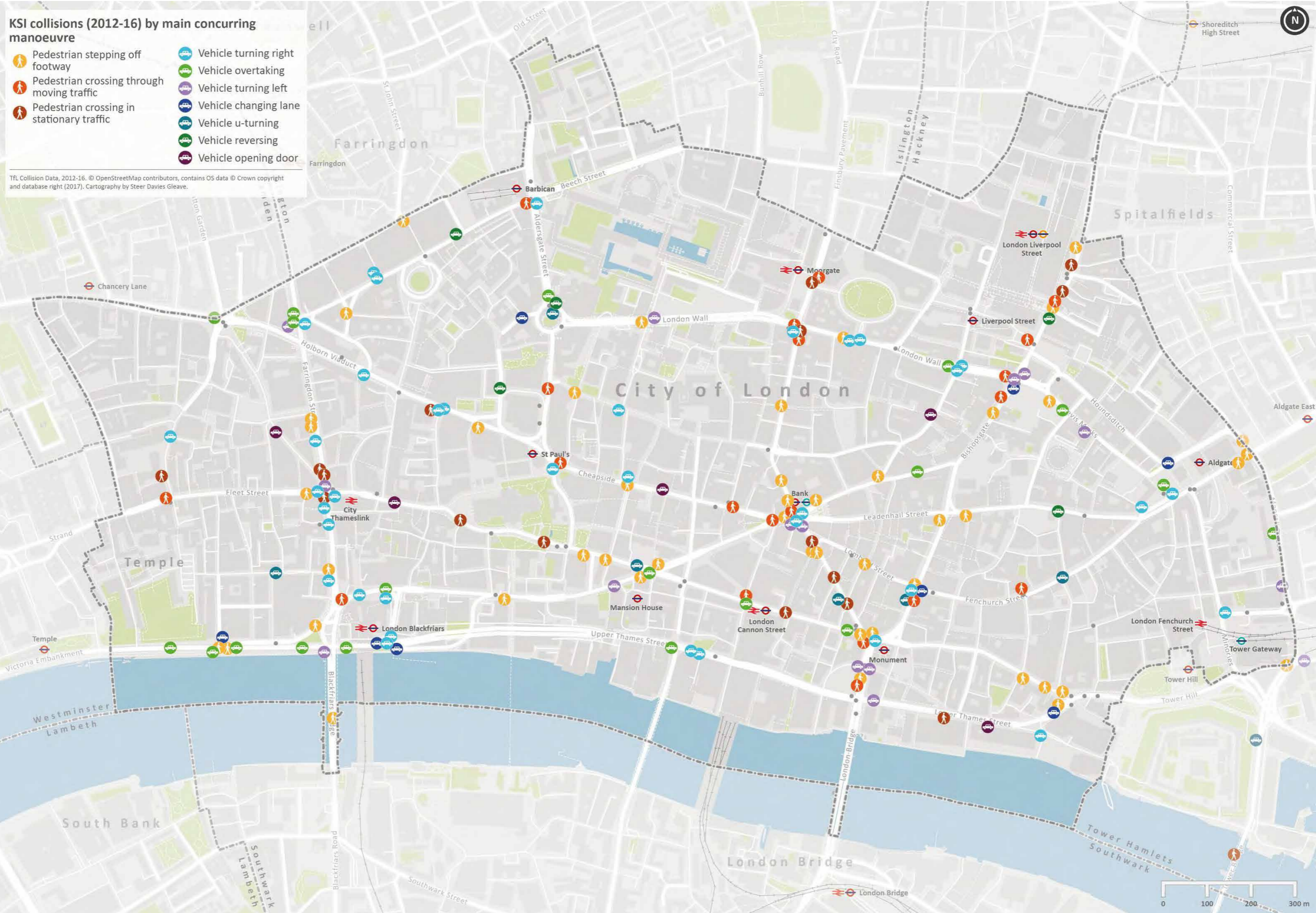
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KSI collisions (2012-16) by main concurring manoeuvre

-  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

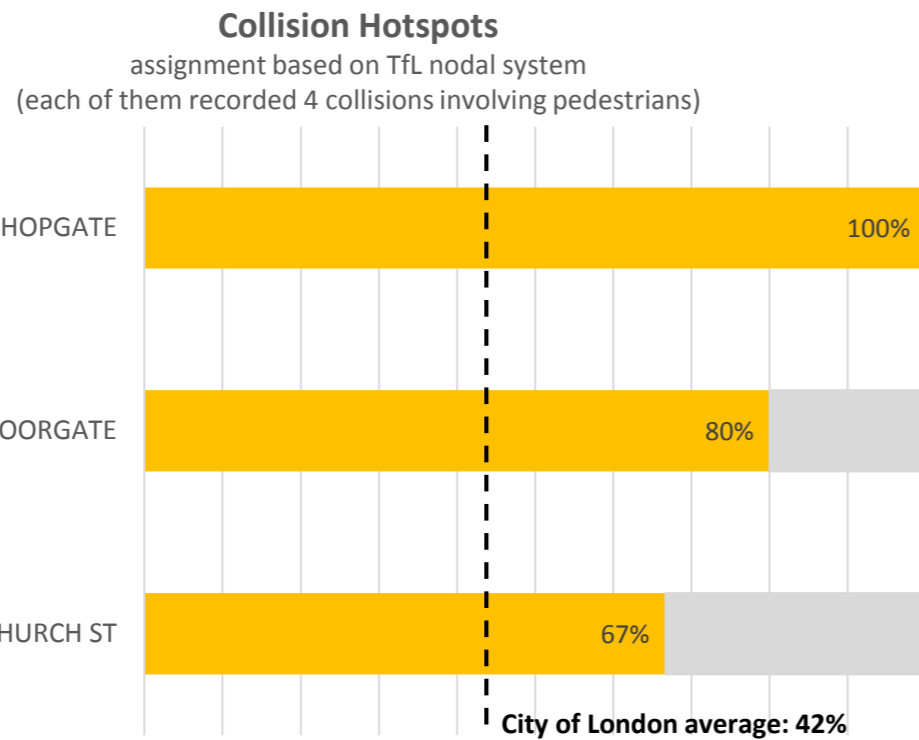
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Focus on Vulnerable Users

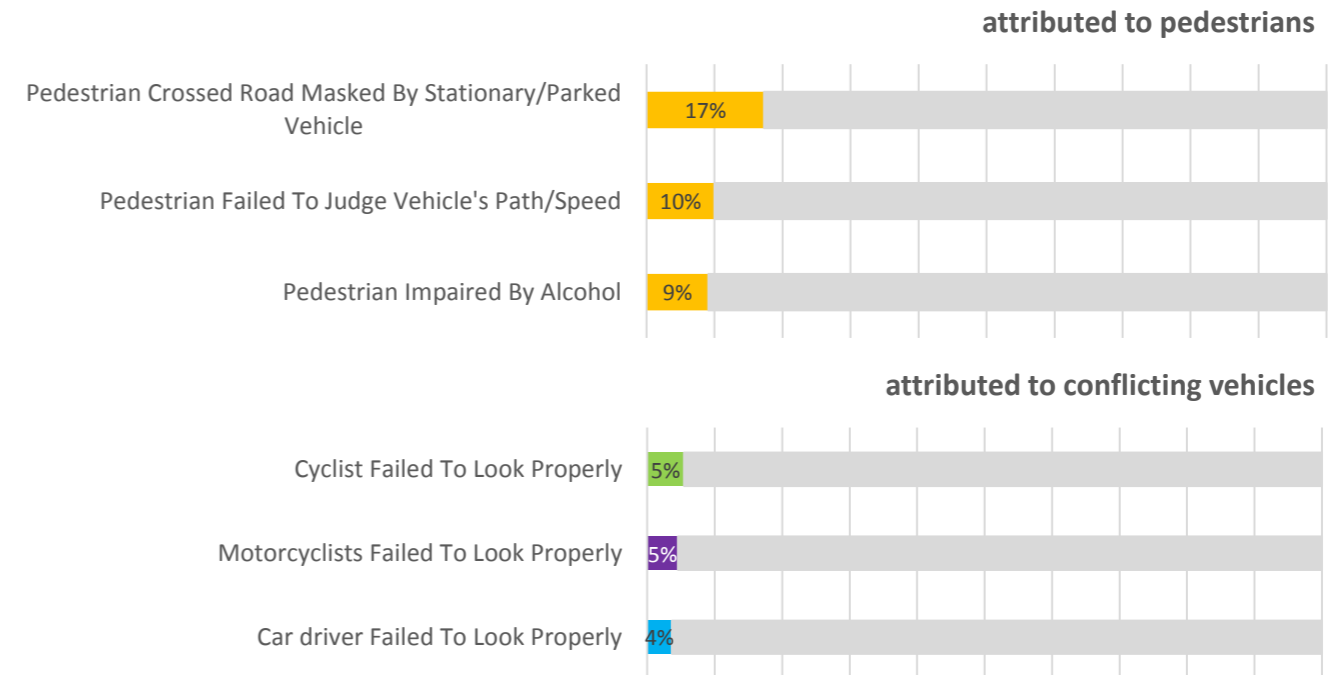
Killed/Seriously Injured (KSI) Collisions involving pedestrians

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



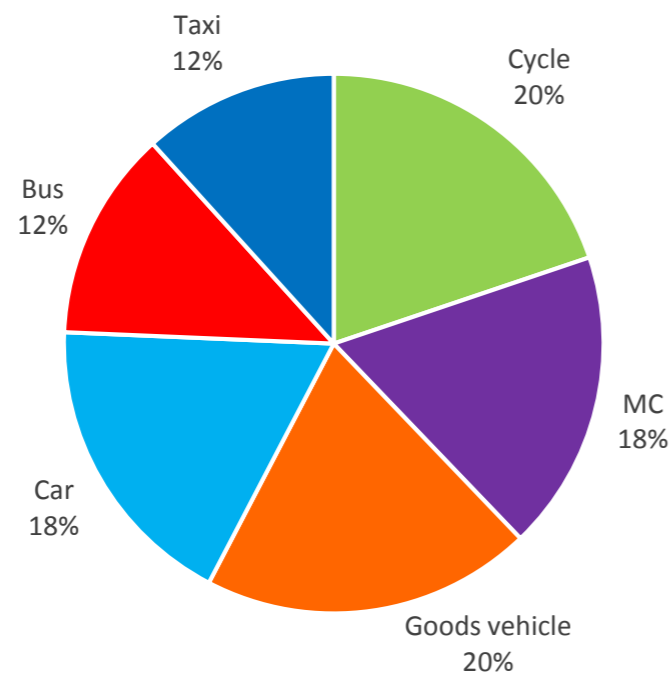
Most frequent contributing factors

(more than one factor can contribute to each collision)



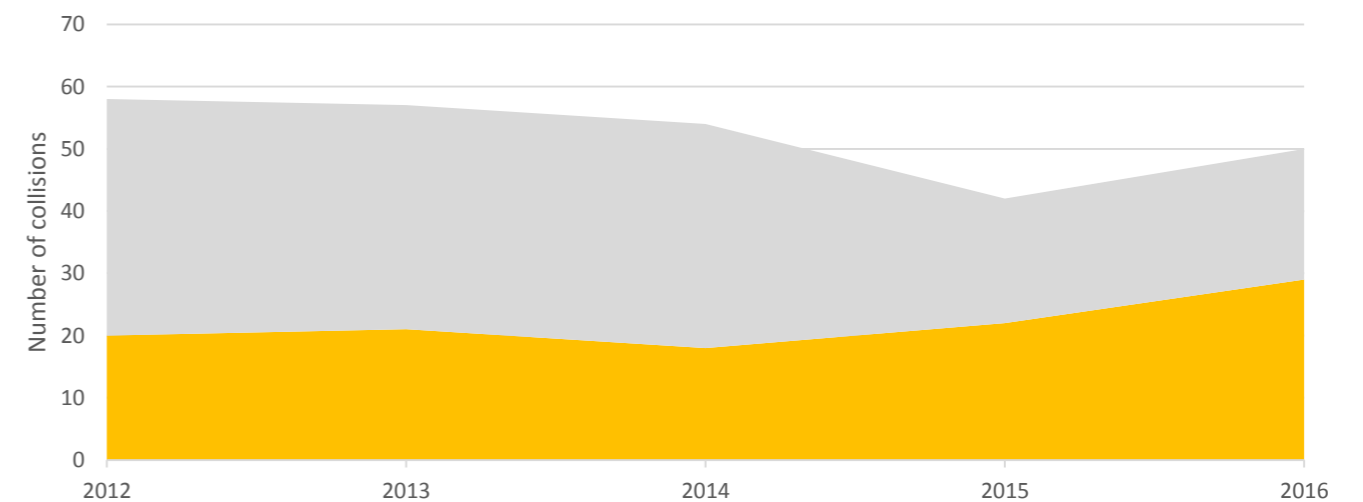
Modes involved in collisions with pedestrians

(by percentage)

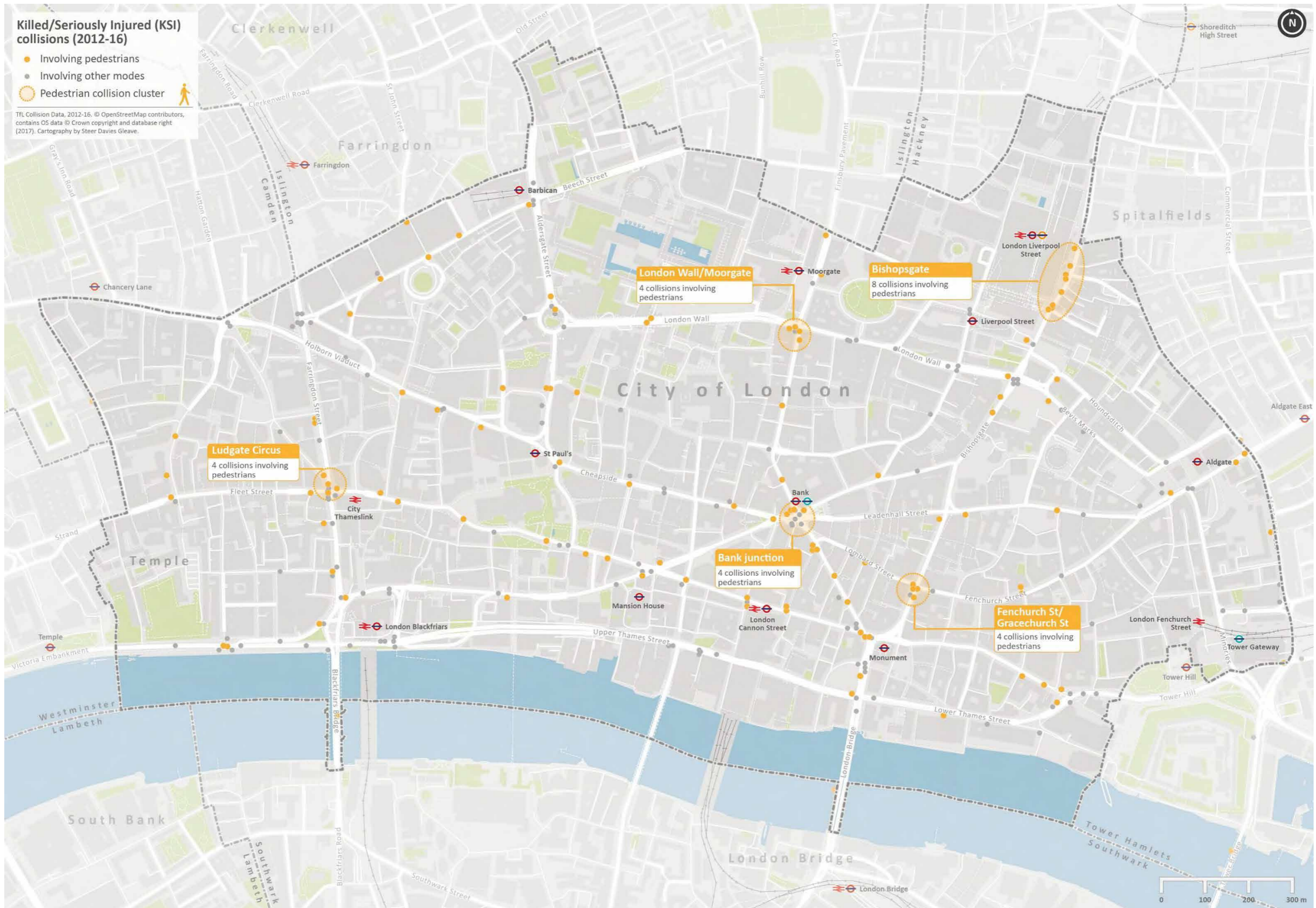


Yearly profile

(total and pedestrian related-collisions)

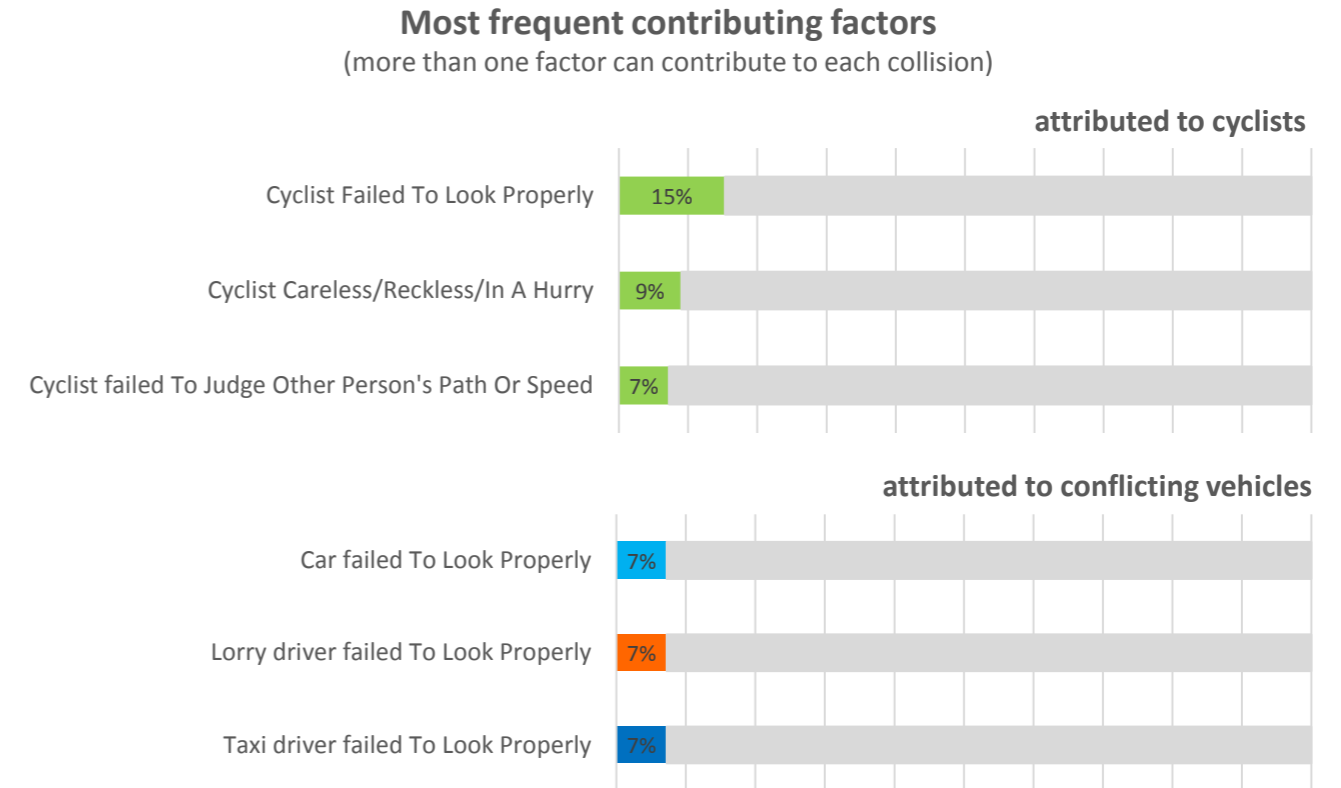
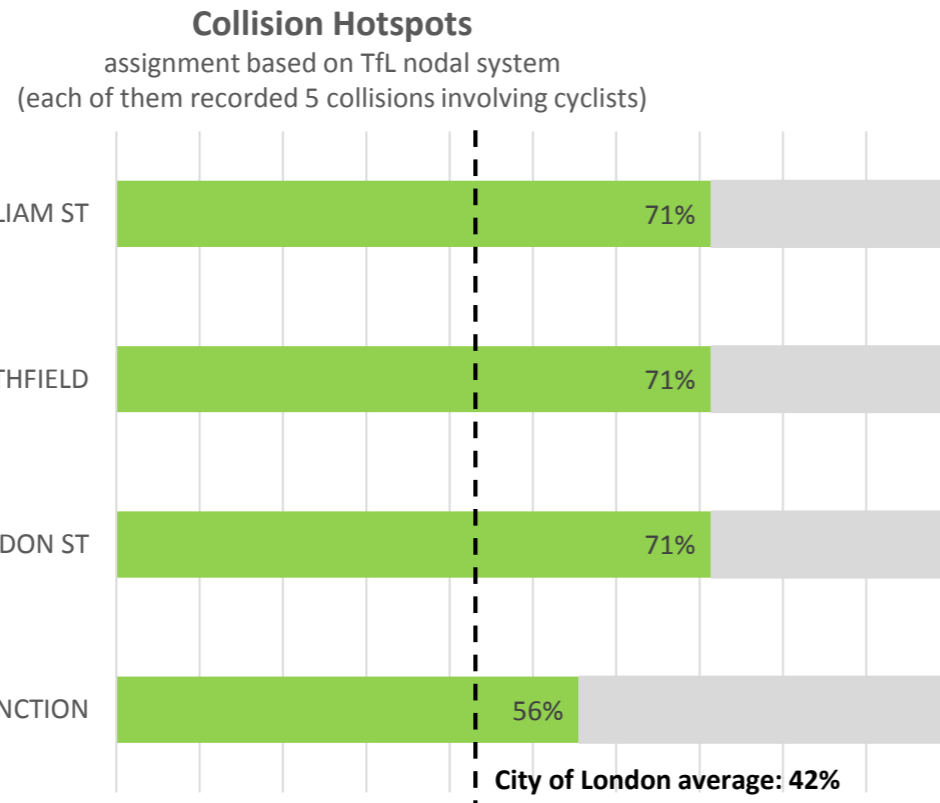


Year	2012	2013	2014	2015	2016
Collisions	58	57	54	42	50
Collisions involving pedestrians	20	21	18	22	29
% of the total	34%	37%	33%	52%	58%



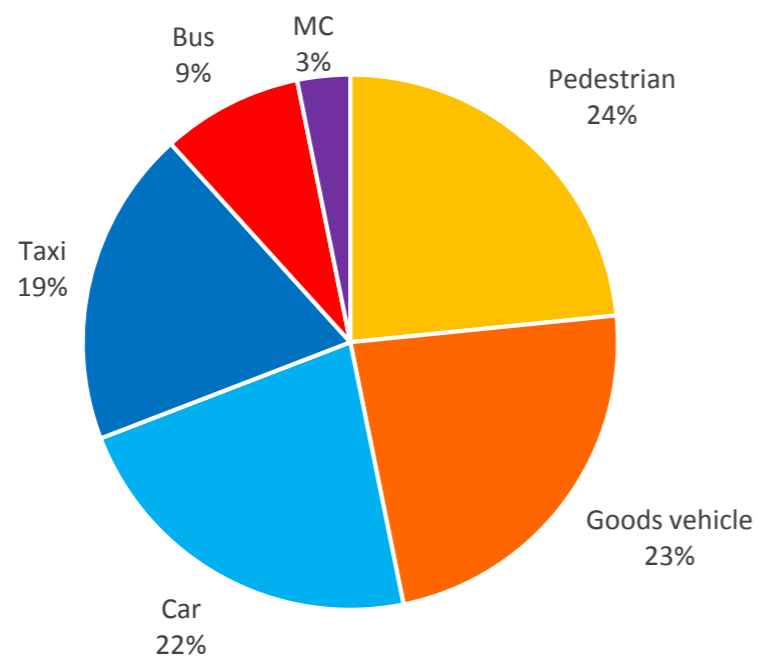
Killed/Seriously Injured (KSI) Collisions involving cyclists

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



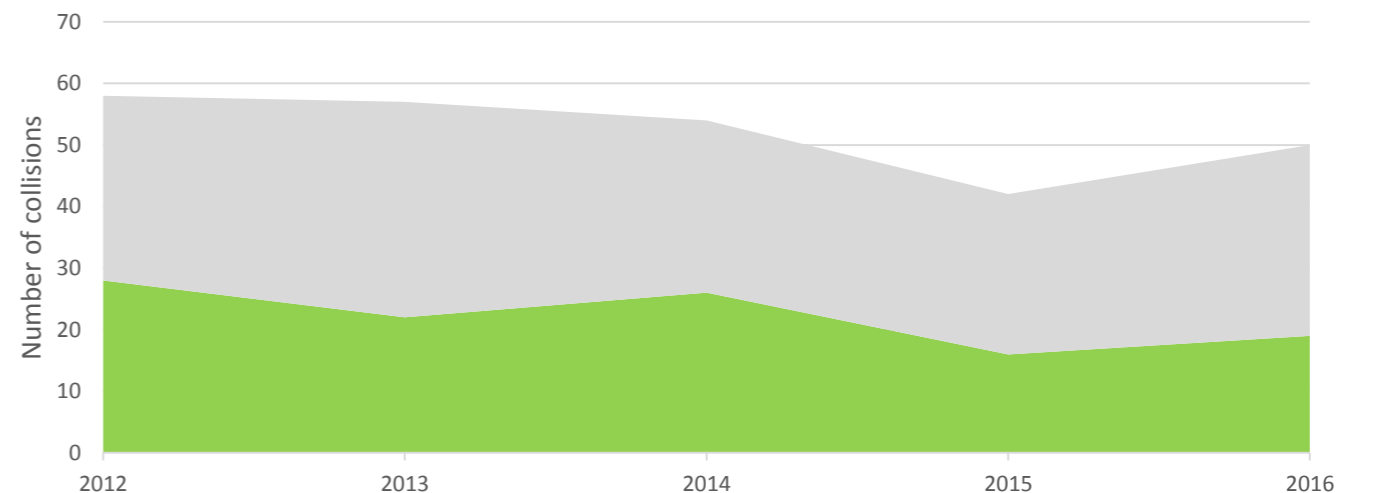
Modes involved in collisions with cyclists

(by percentage)

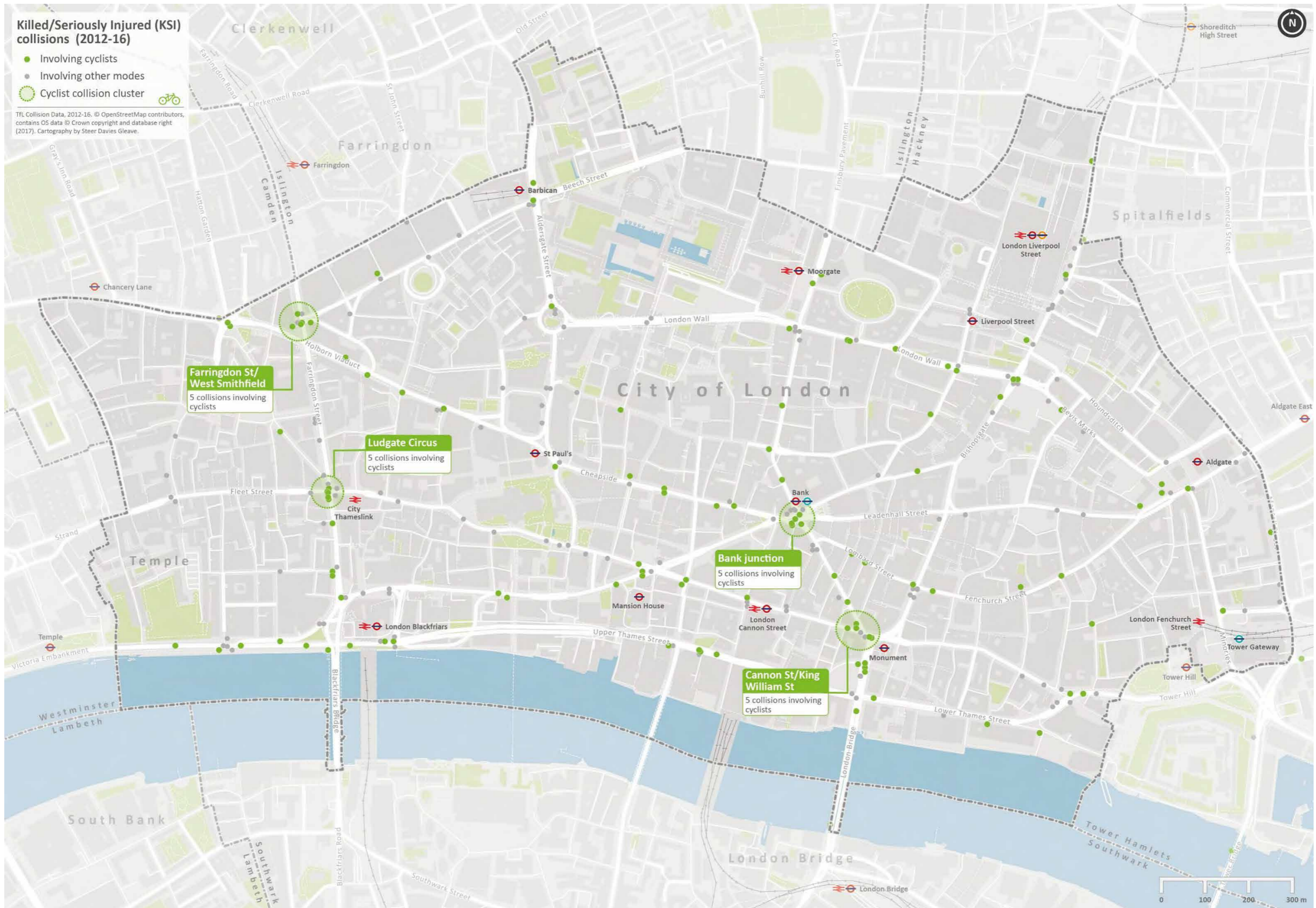


Yearly profile

(total and cyclist related-collisions)

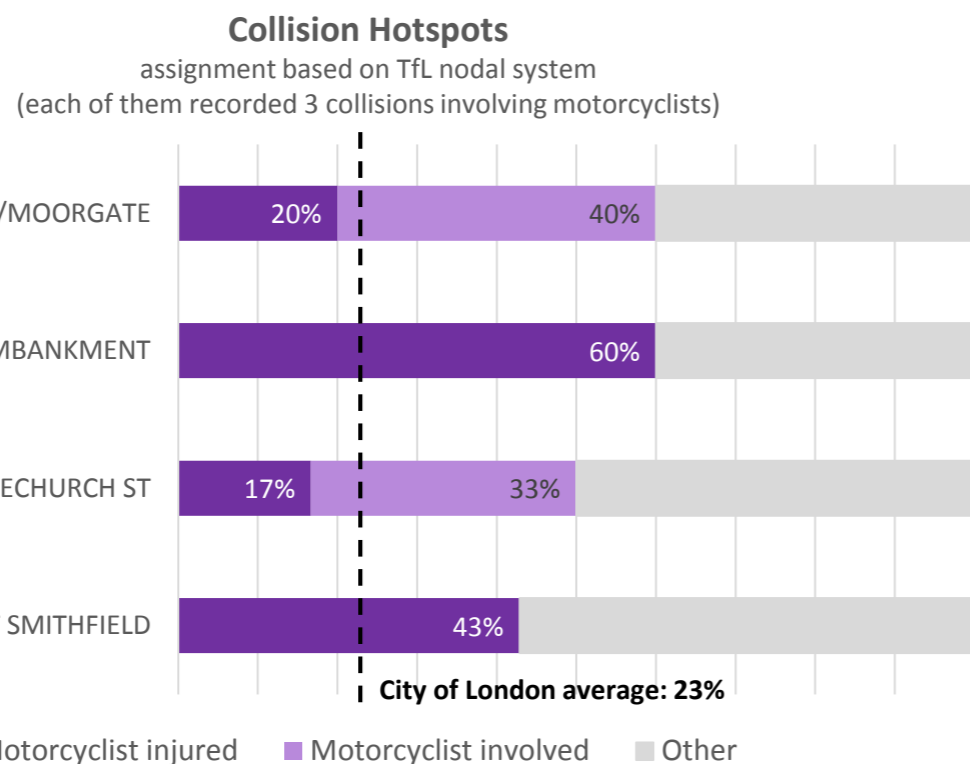


Year	2012	2013	2014	2015	2016
Collisions	58	57	54	42	50
Collisions involving cyclists	28	22	26	16	19
% of the total	48%	39%	48%	38%	38%



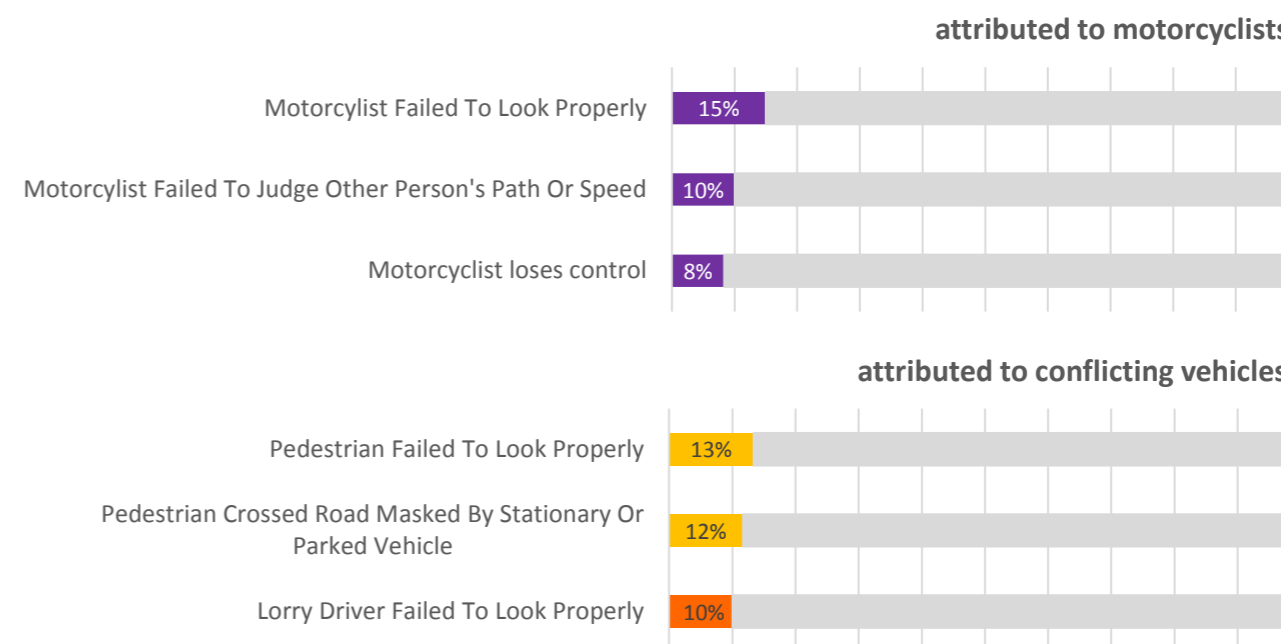
Killed/Seriously Injured (KSI) Collisions involving motorcyclists

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



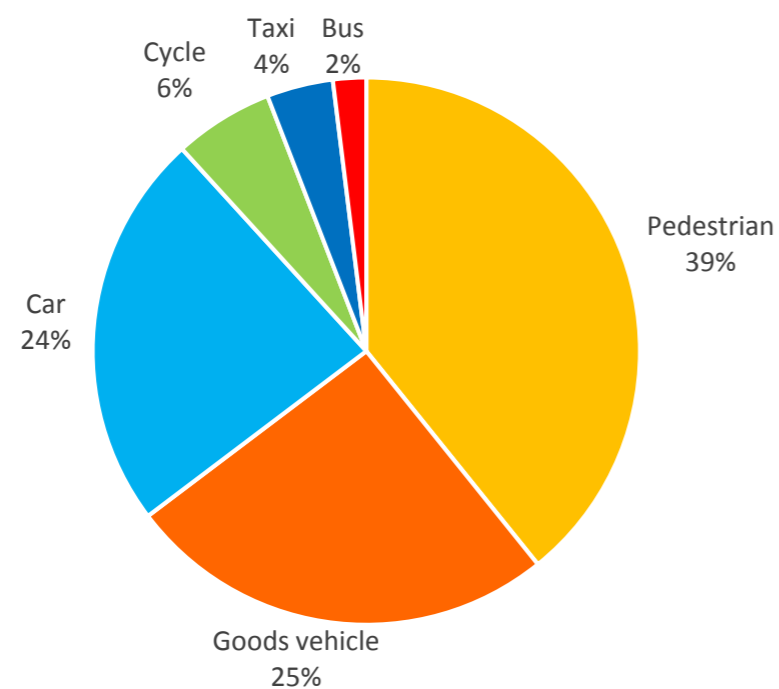
Most frequent contributing factors

(more than one factor can contribute to each collision)



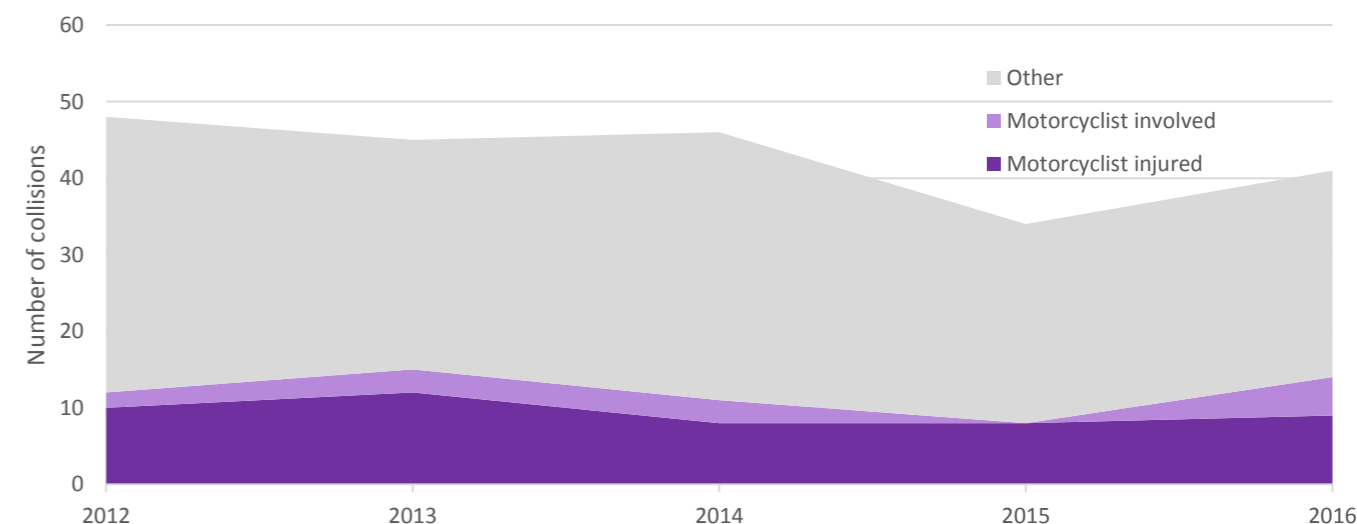
Modes involved in collisions with motorcyclists

(by percentage)

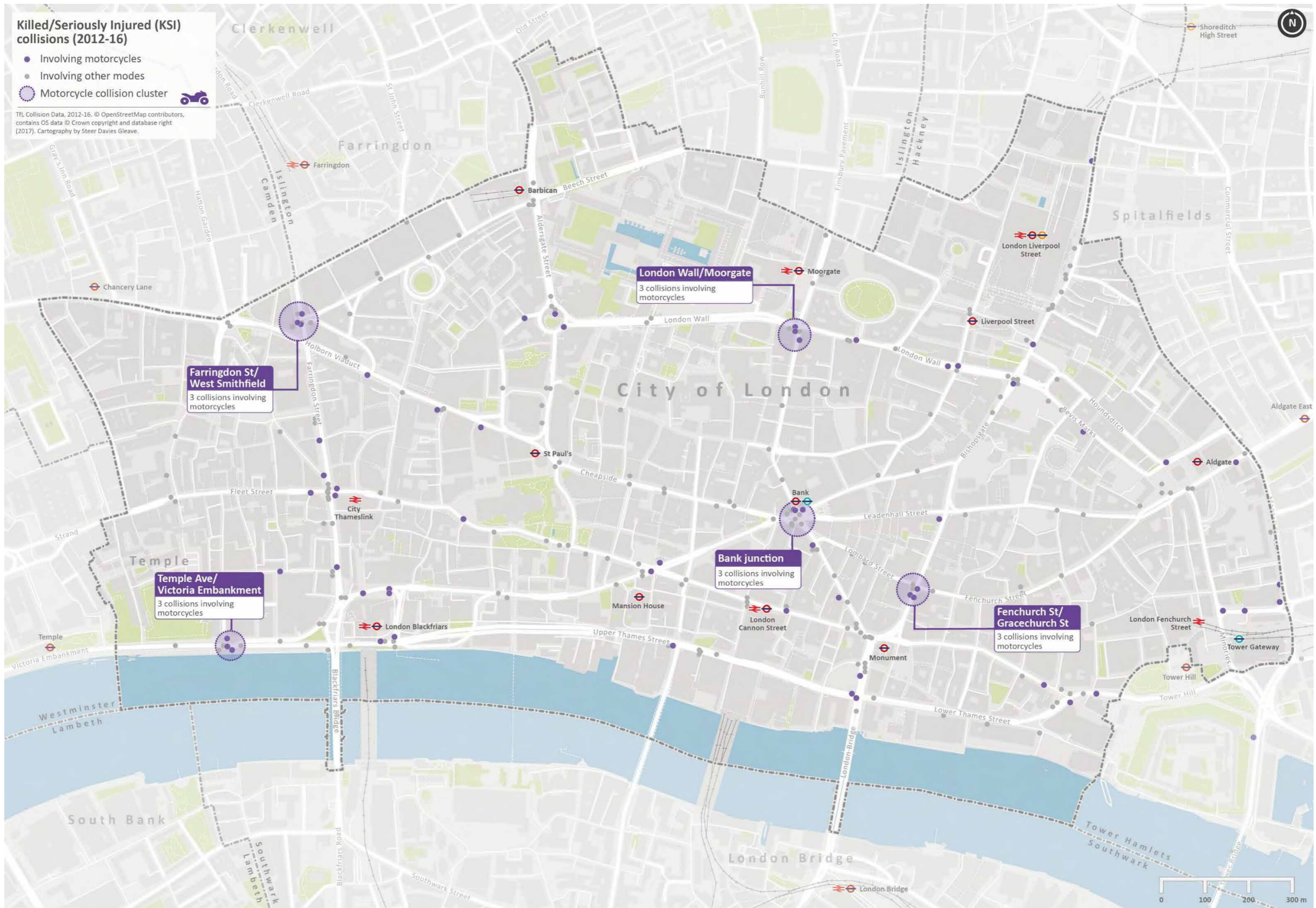


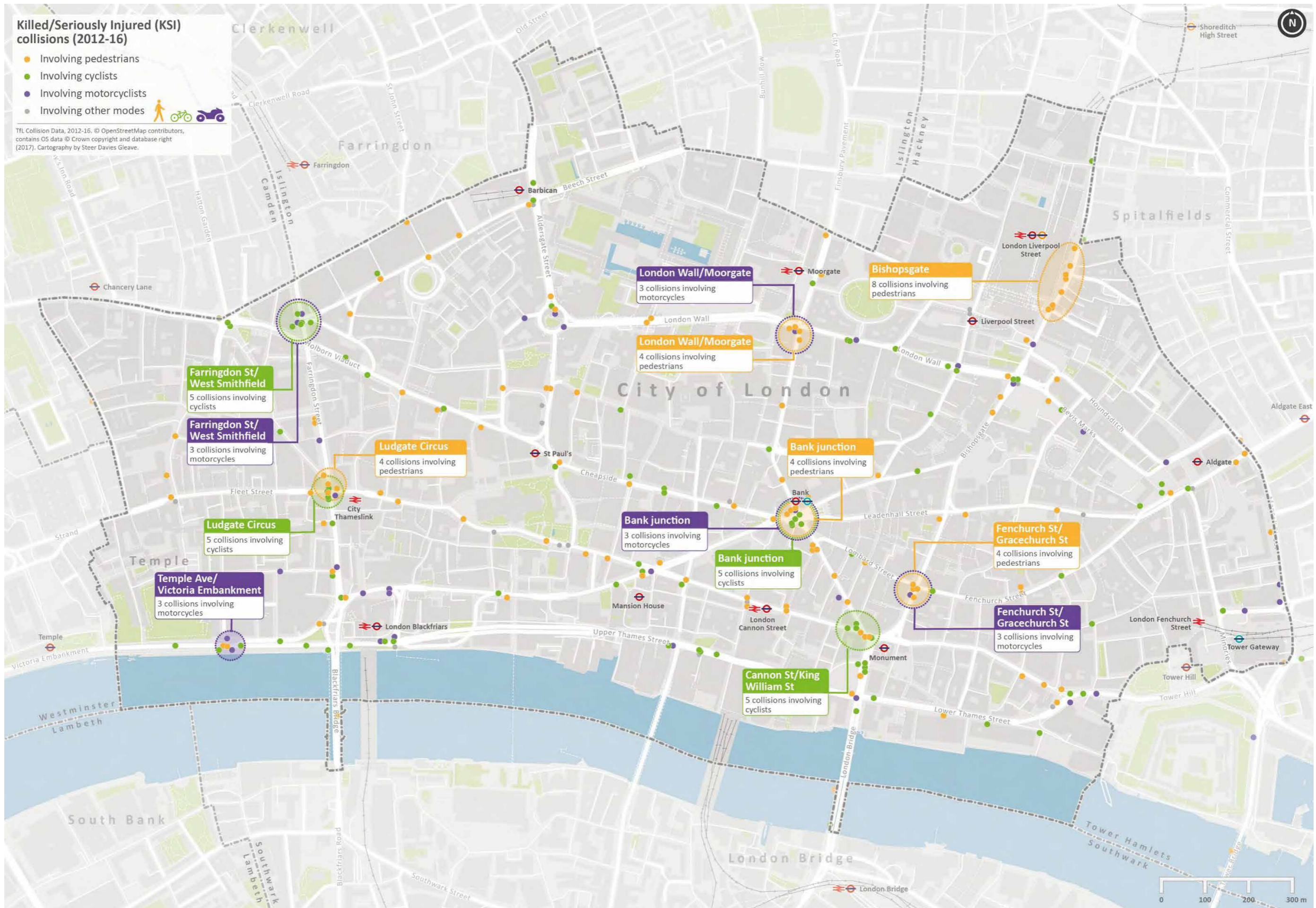
Yearly profile

(total and motorcyclist related-collisions)



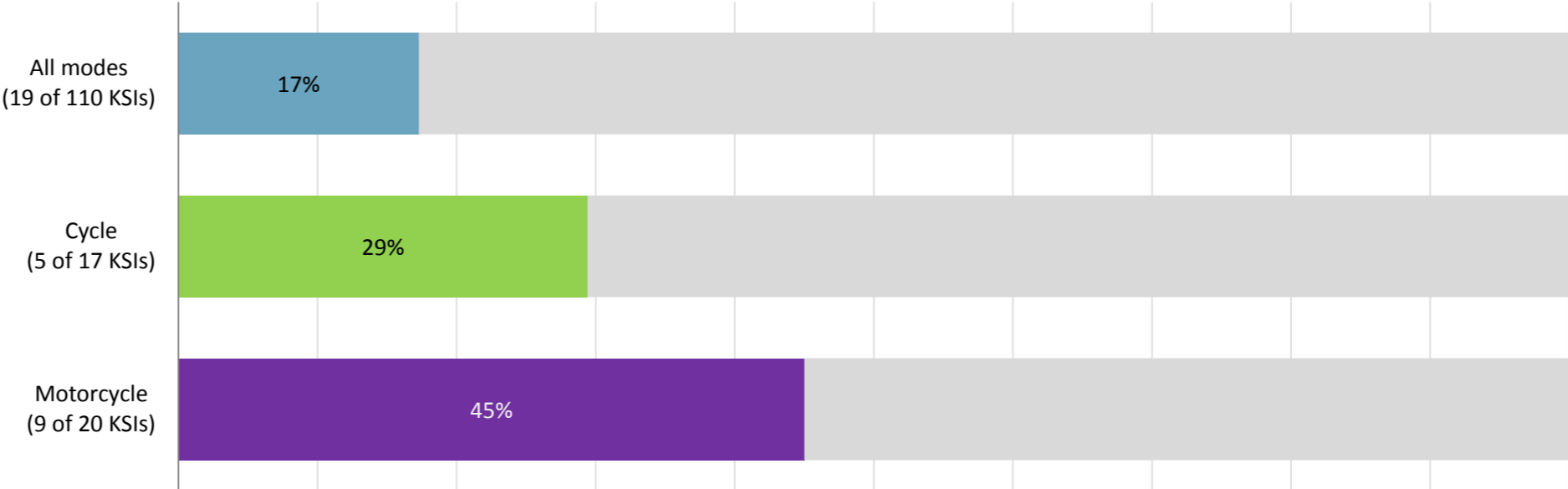
Year	2012	2013	2014	2015	2016
Collisions	58	57	54	42	50
Collisions involving motorcyclists	12	15	11	8	14
% of the total	21%	26%	20%	19%	28%





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

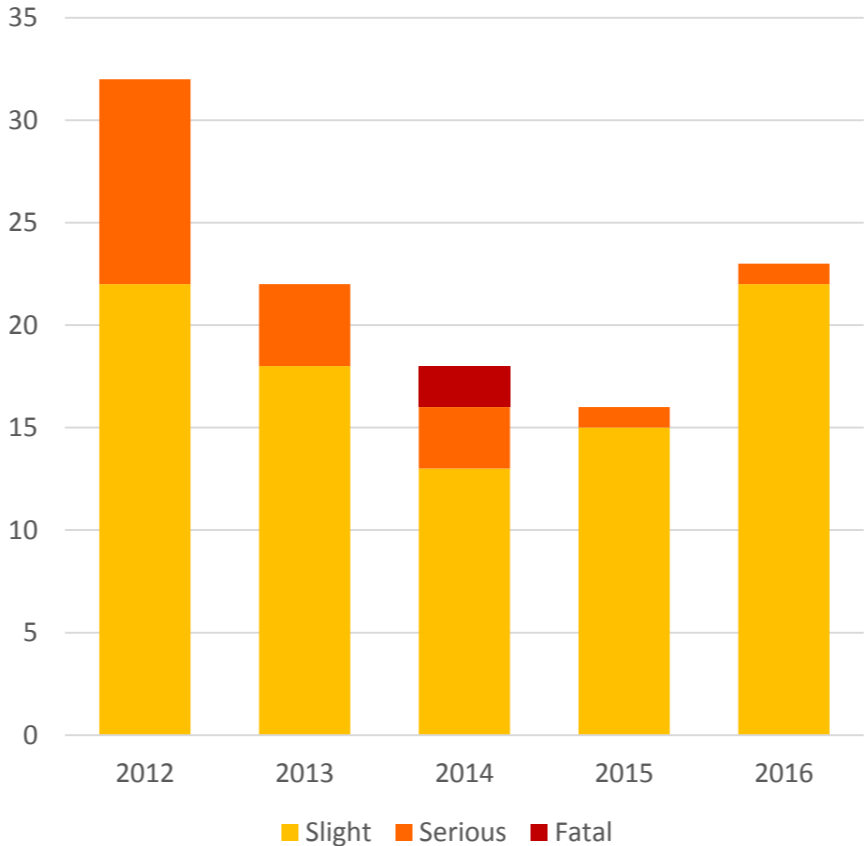
Share of pedestrian-related collisions listing 'pedestrian crossing masked by stationary traffic or parked vehicle' as contributing factor



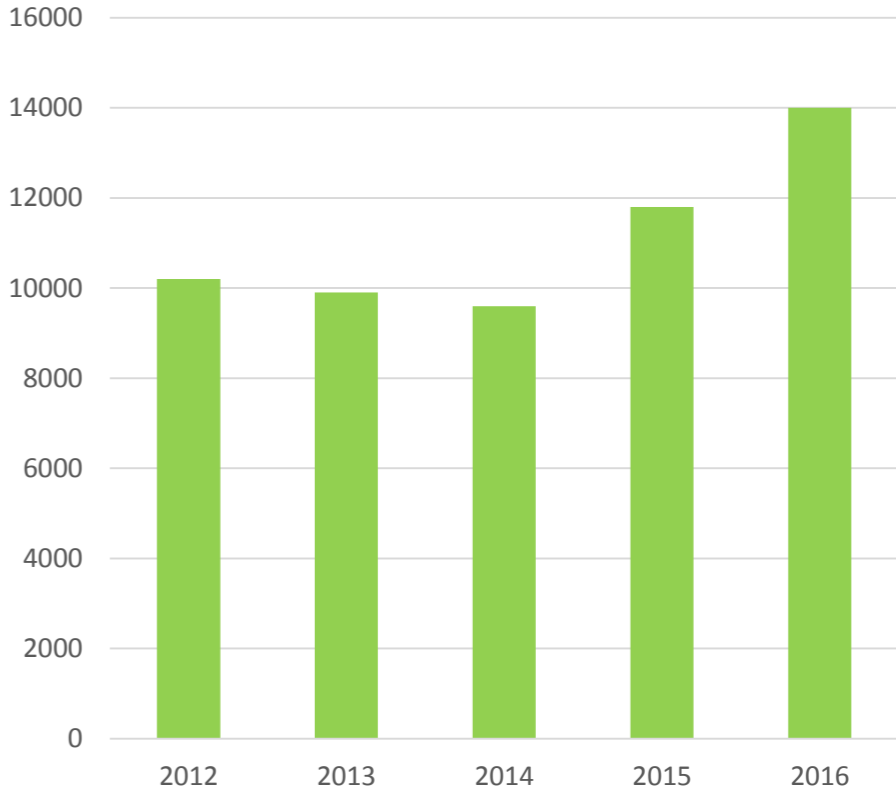
Based on TfL Personal Injury Collision Data 2012-2016 (provisional): 110 KSI collisions recorded - 4 of which fatal, 106 resulting in serious injuries

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

Recorded collisions along the two corridors



Recorded daily cycle flow along the two corridors



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.

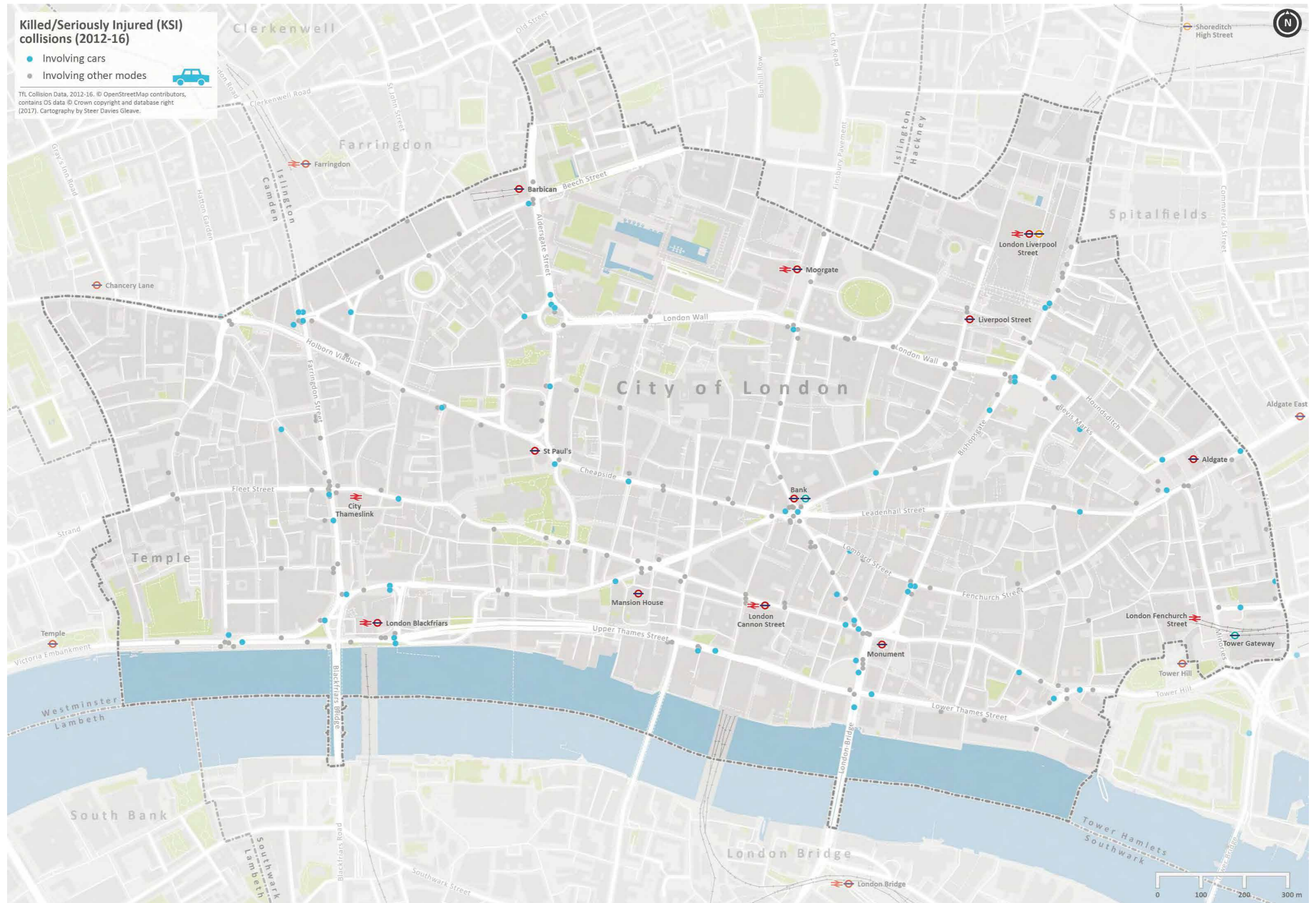
Appendix A Other Road Users

Killed/Seriously Injured (KSI) collisions (2012-16)

- Involving cars
- Involving other modes



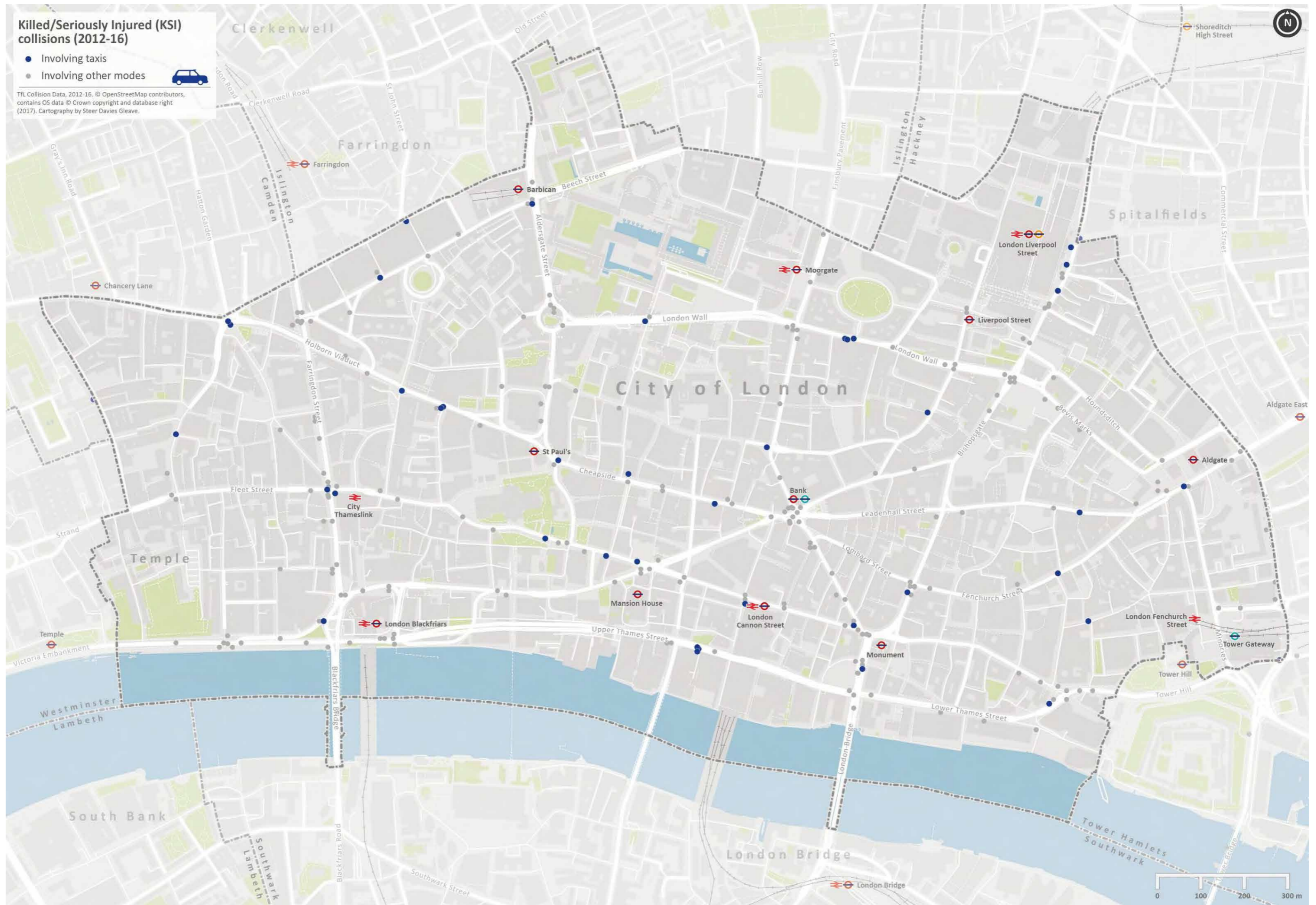
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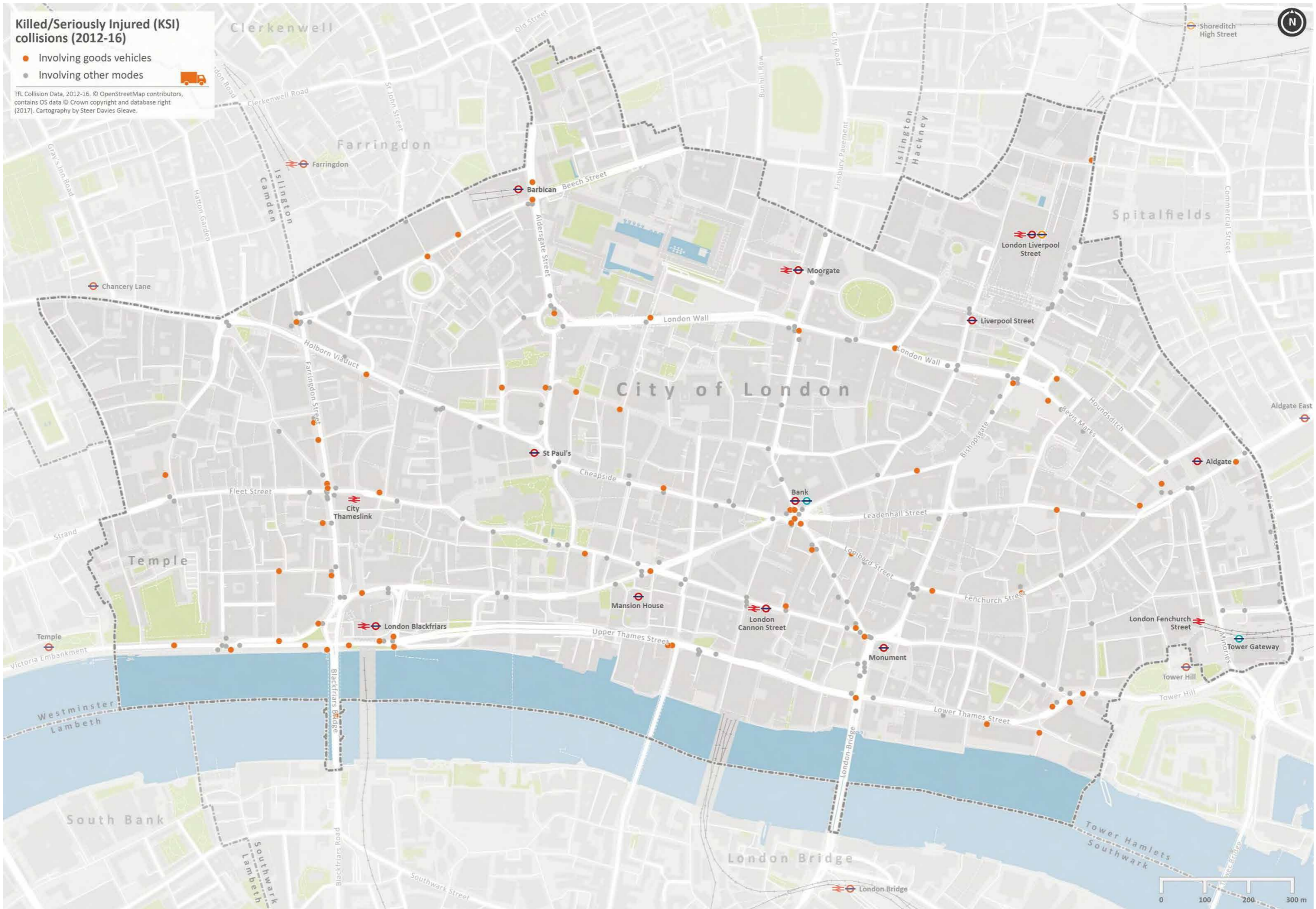


Killed/Seriously Injured (KSI) collisions (2012-16)

- Involving taxis
- Involving other modes

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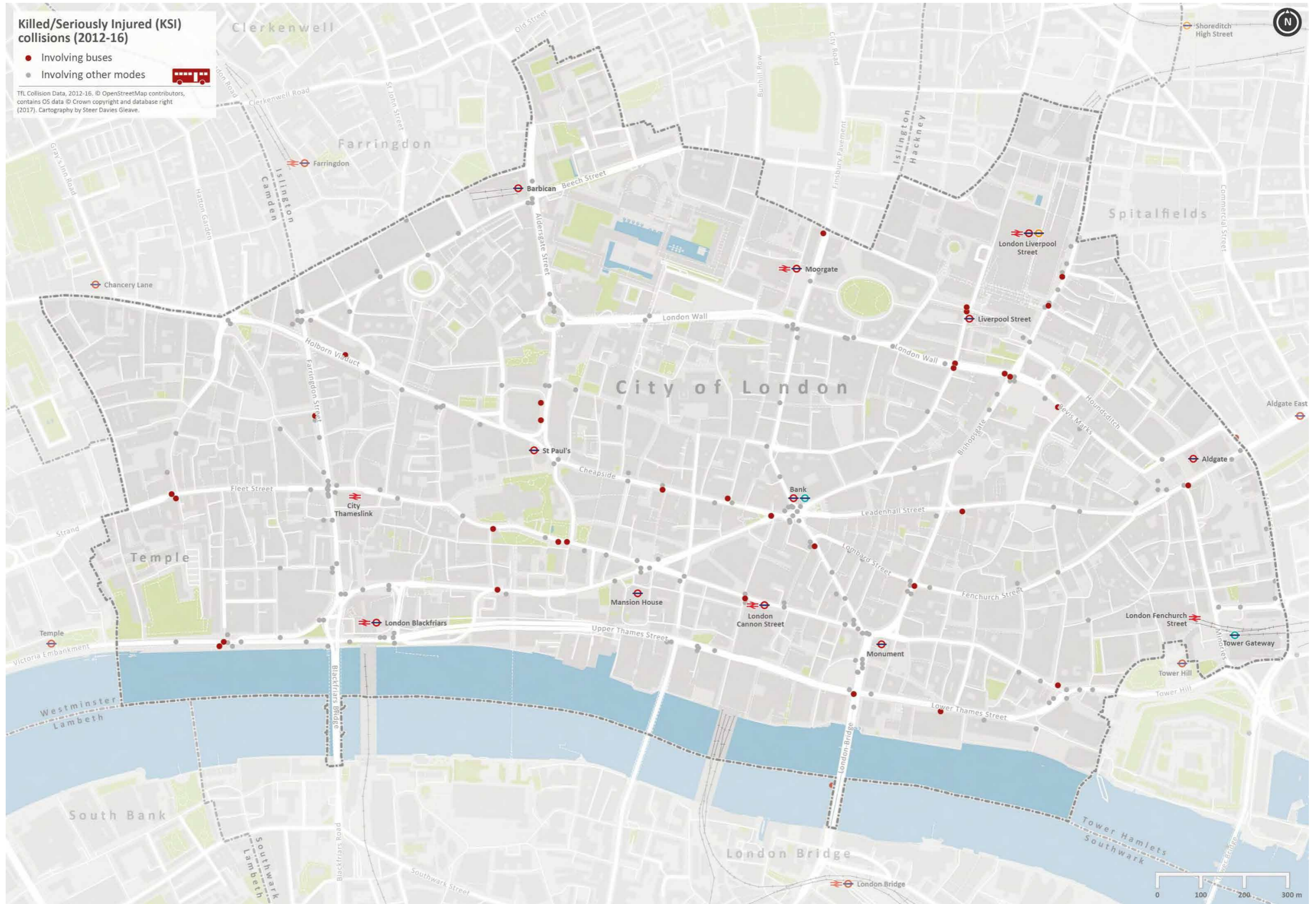


Killed/Seriously Injured (KSI) collisions (2012-16)

- Involving buses
- Involving other modes



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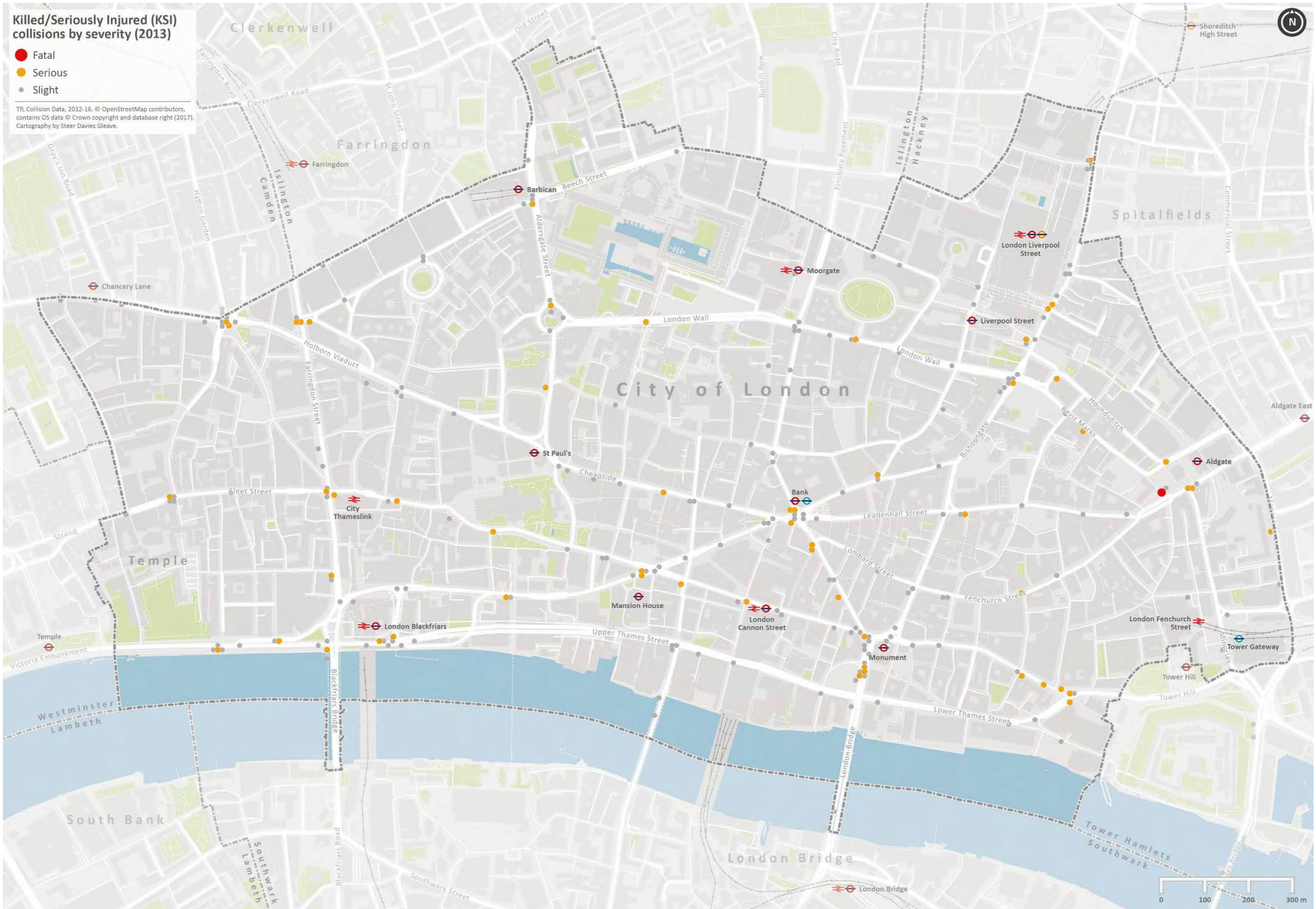
Appendix B
KSI collisions by year

Killed/Seriously Injured (KSI) collisions by severity (2012)

- Fatal
- Serious
- Slight

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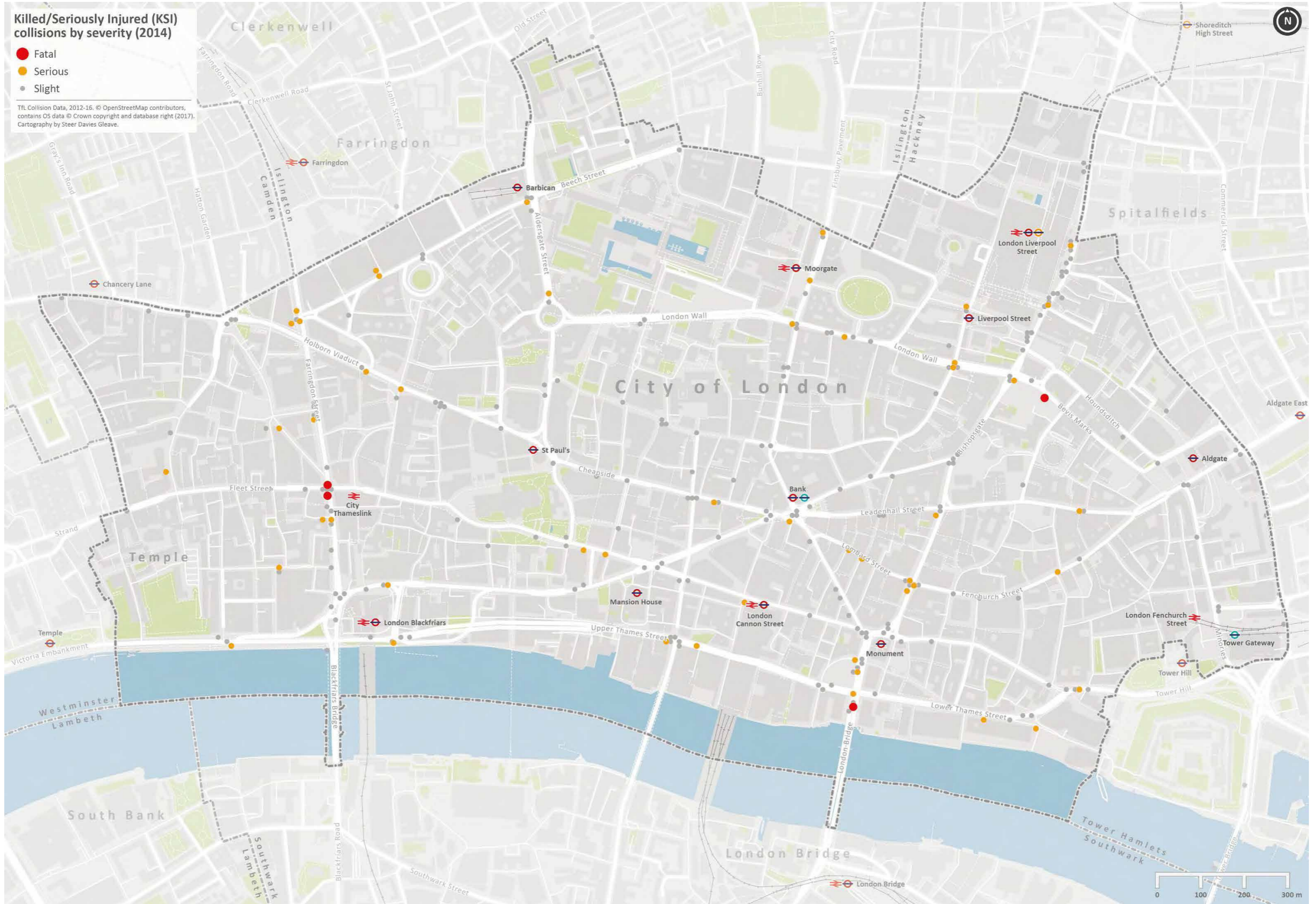




Killed/Seriously Injured (KSI) collisions by severity (2014)

- Fatal
- Serious
- Slight

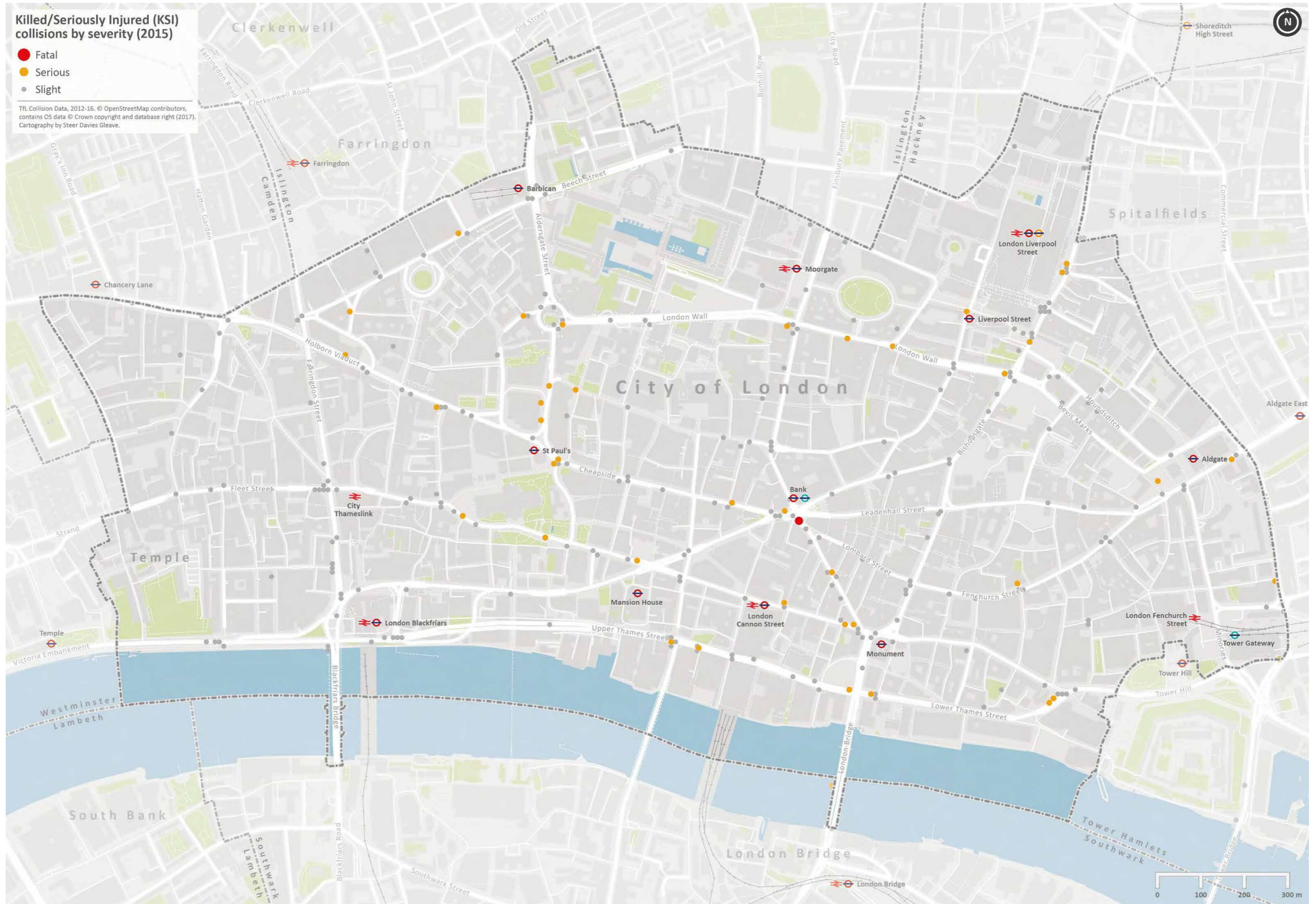
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Killed/Seriously Injured (KSI) collisions by severity (2015)

- Fatal
- Serious
- Slight

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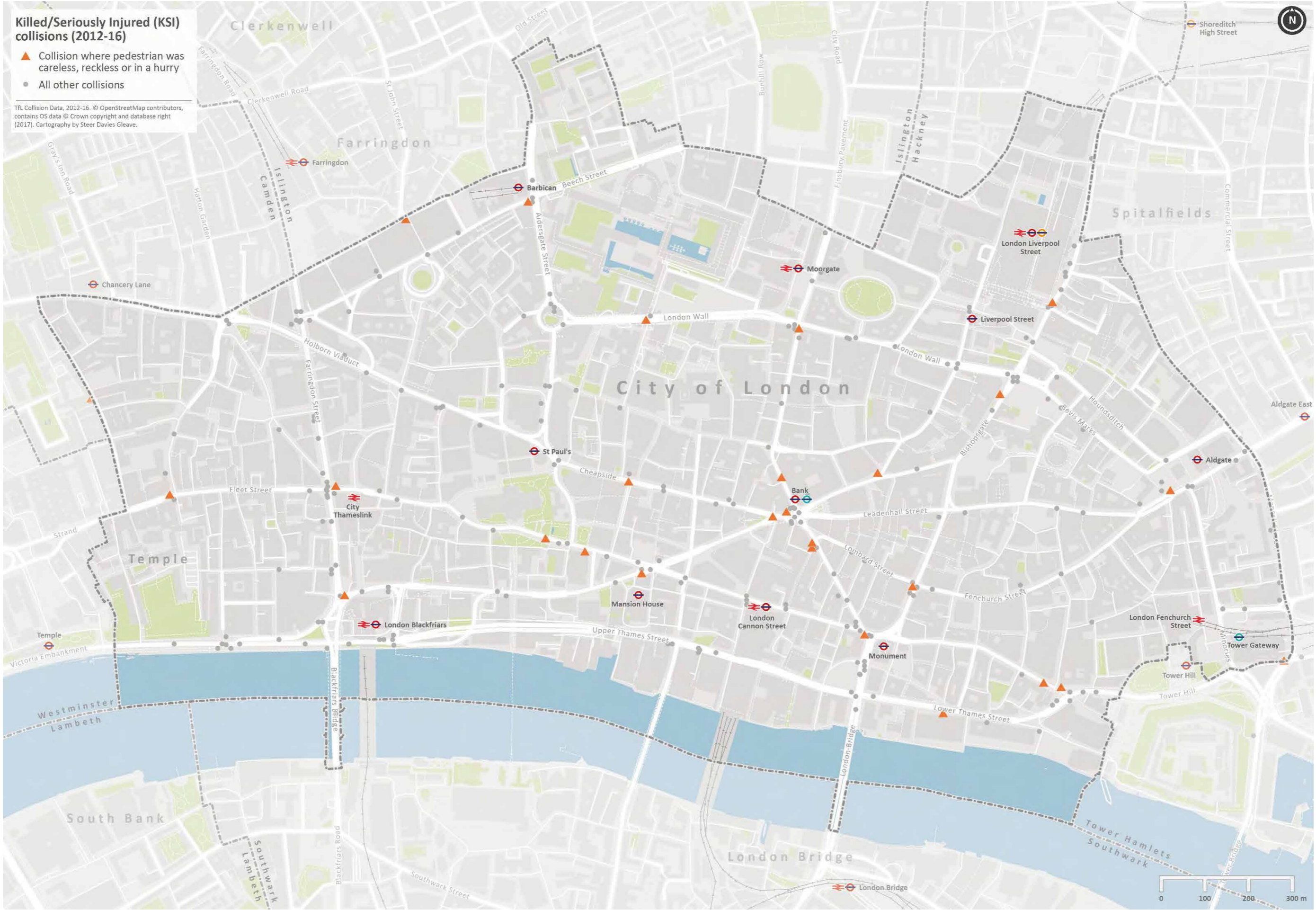
Appendix C

Maps of contributing factors

Killed/Seriously Injured (KSI) collisions (2012-16)

- ▲ Collision where pedestrian was careless, reckless or in a hurry
- All other collisions

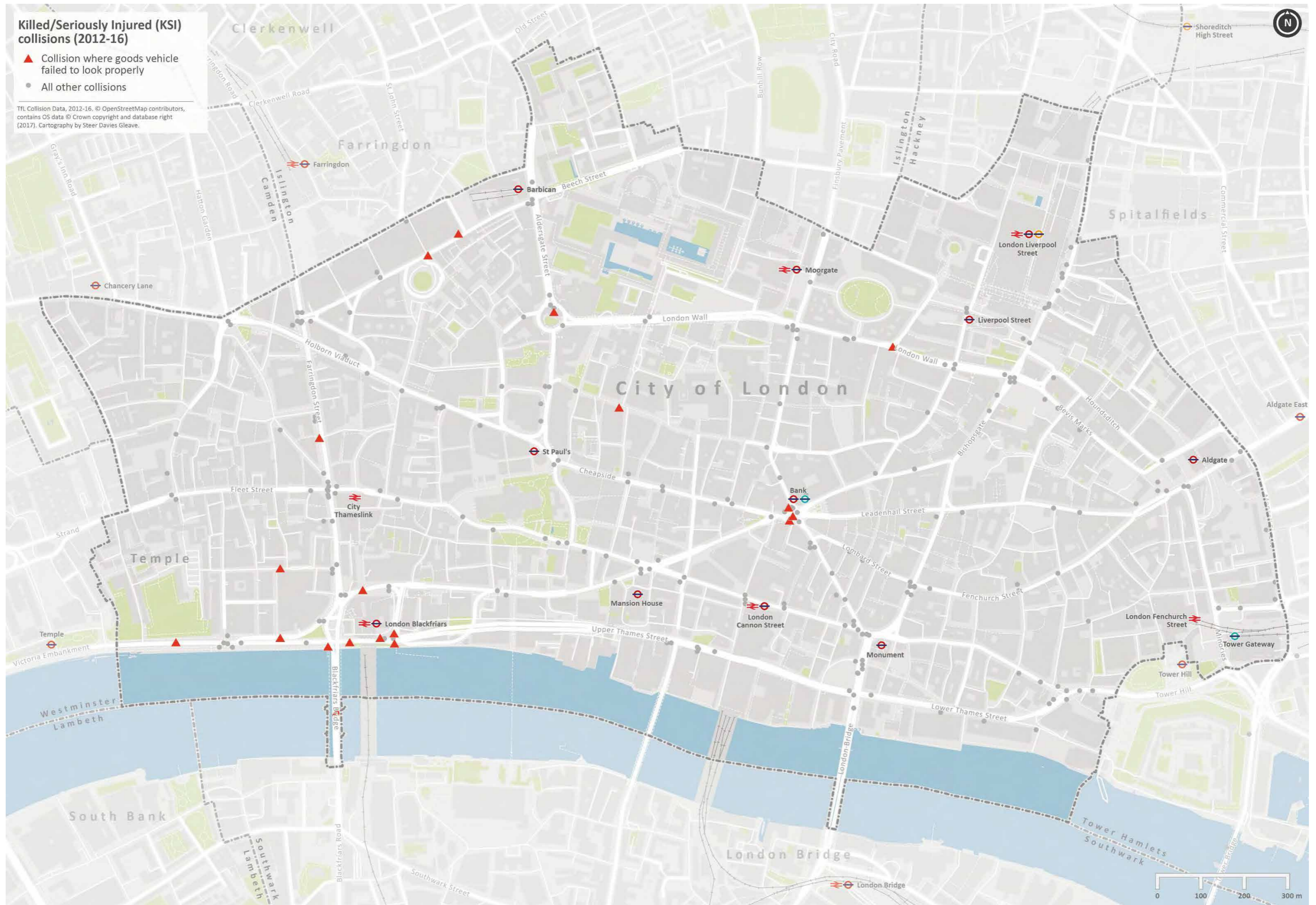
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Killed/Seriously Injured (KSI) collisions (2012-16)

- ▲ Collision where goods vehicle failed to look properly
- All other collisions

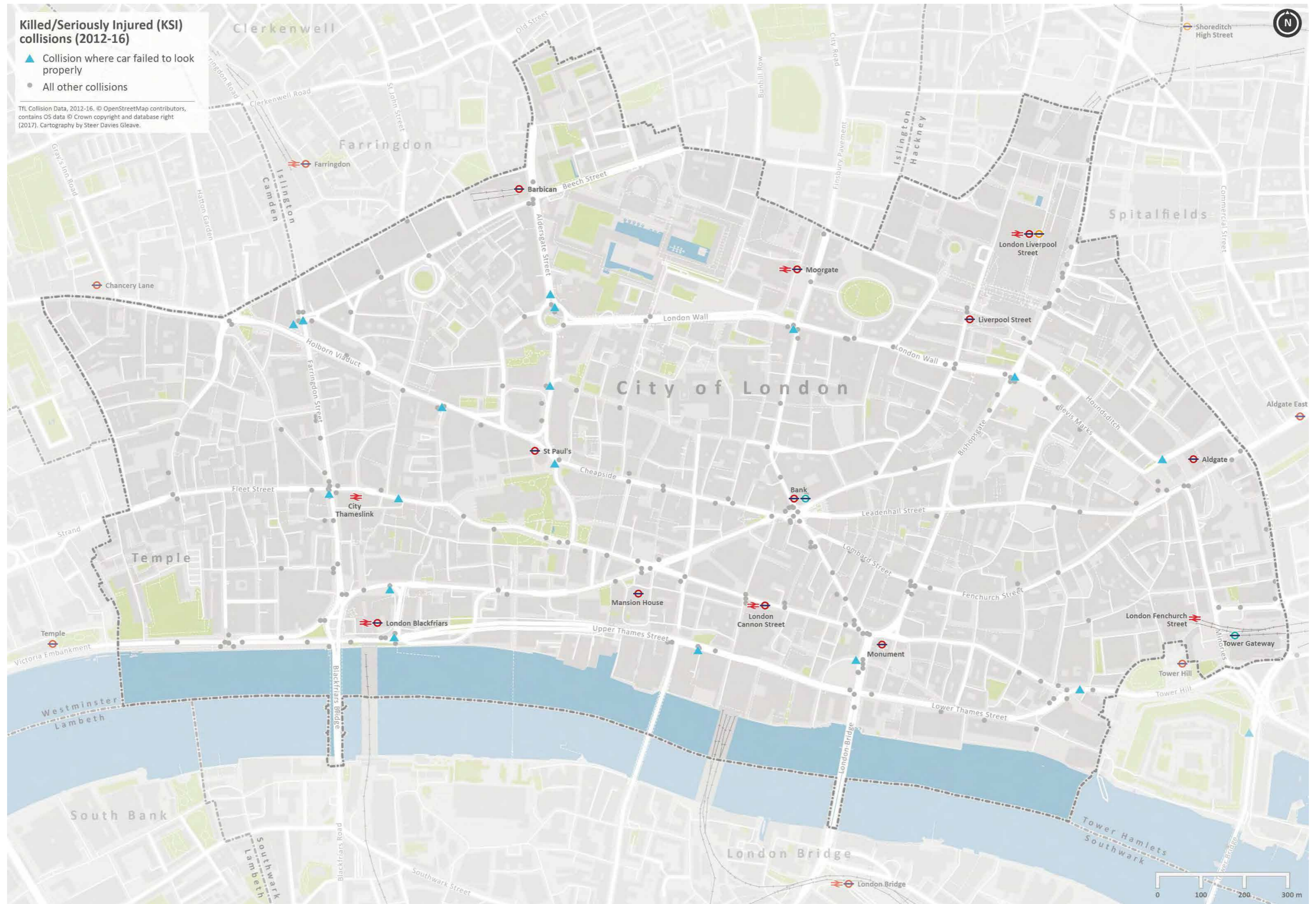
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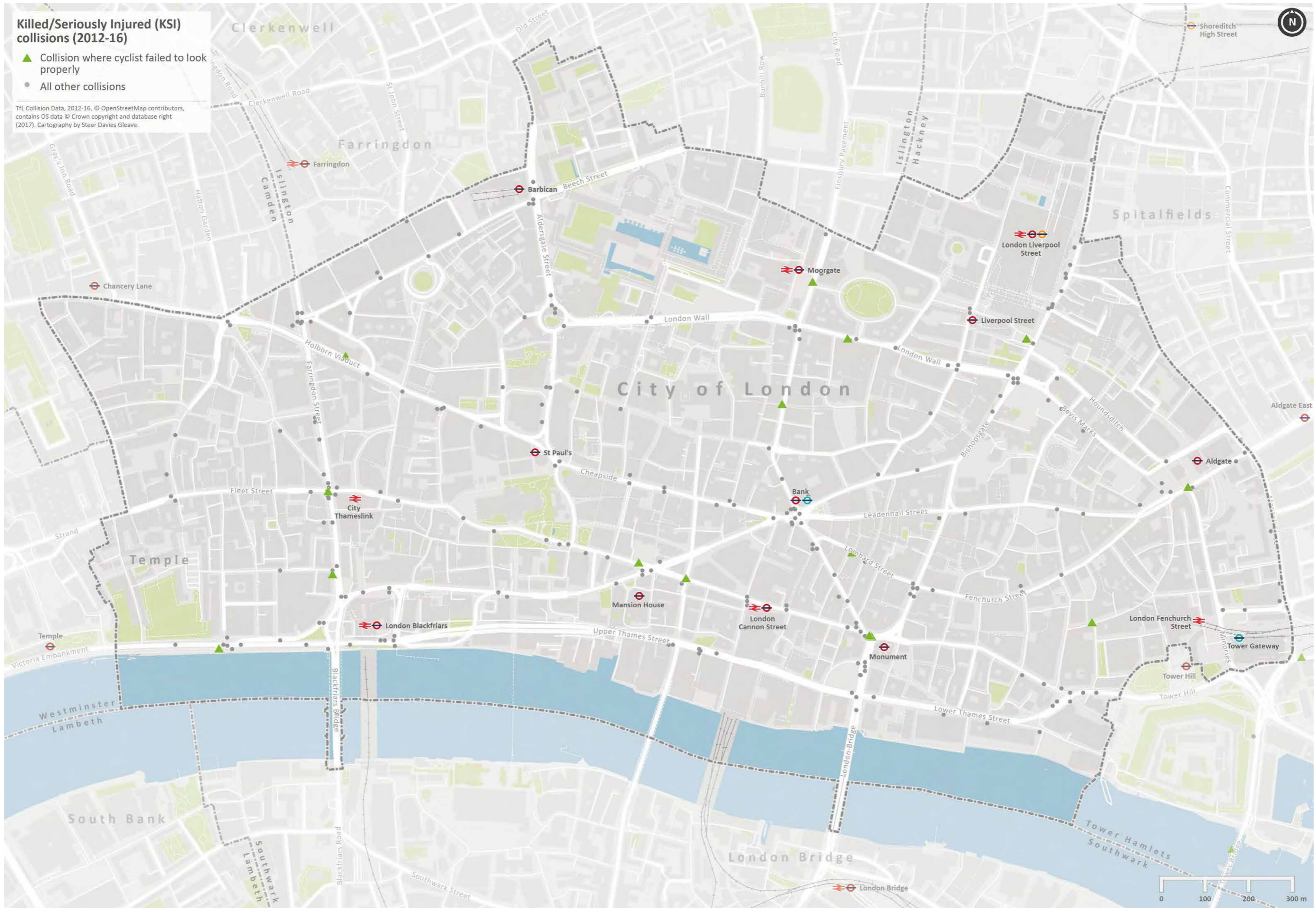


Killed/Seriously Injured (KSI) collisions (2012-16)

- ▲ Collision where car failed to look properly
- All other collisions

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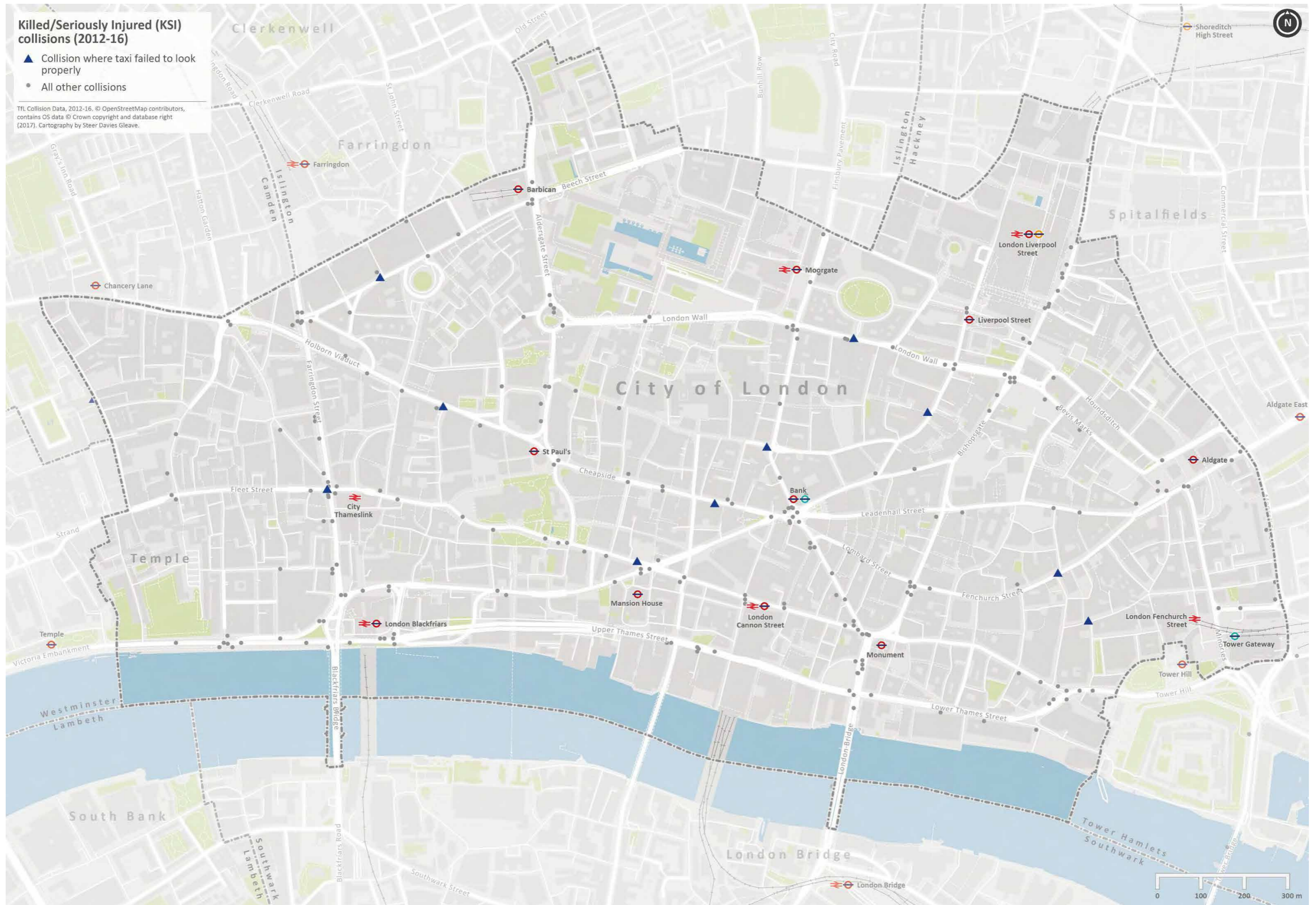




Killed/Seriously Injured (KSI) collisions (2012-16)

- ▲ Collision where 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

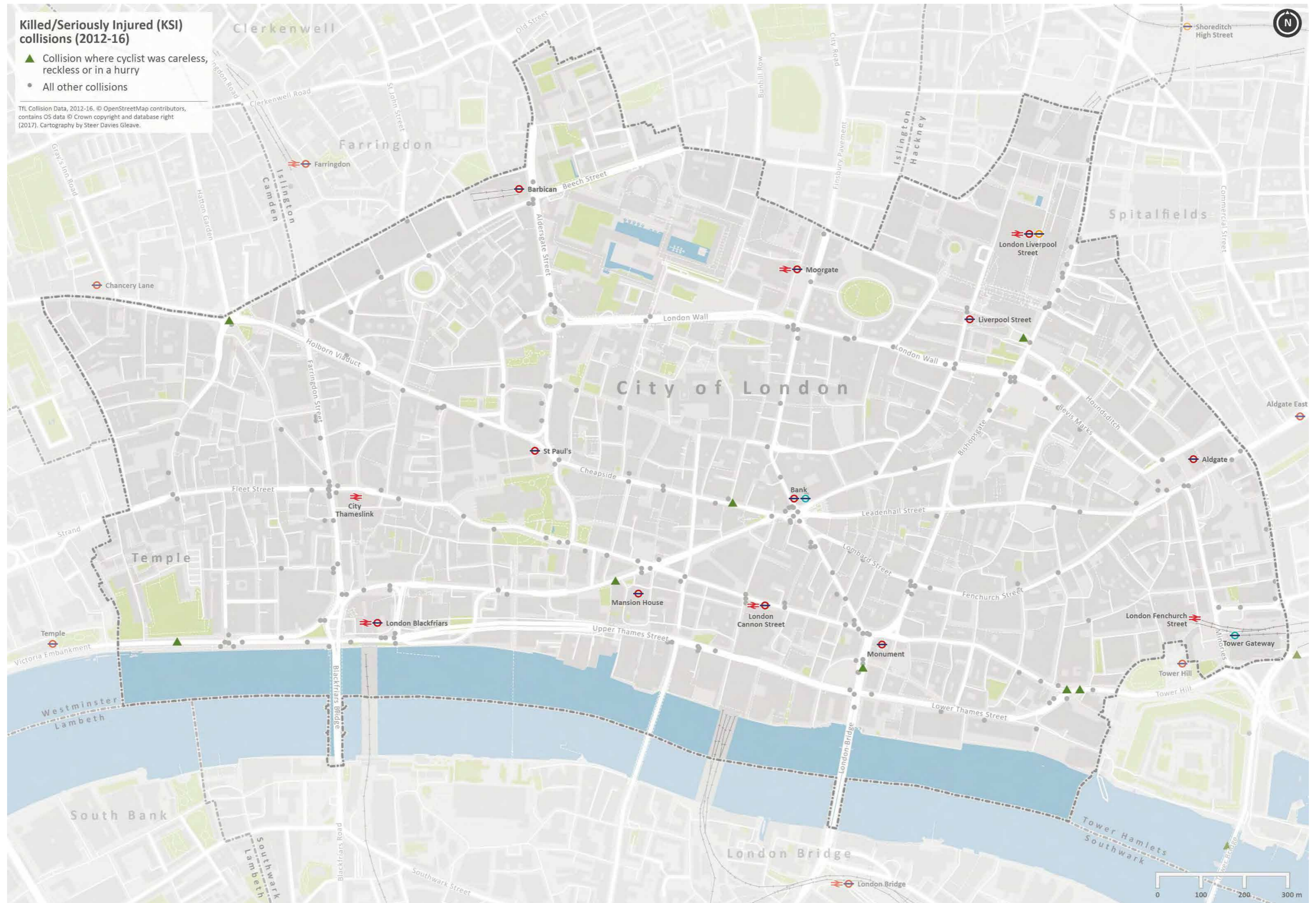
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Killed/Seriously Injured (KSI) collisions (2012-16)

- ▲ Collision where cyclist was careless, reckless or in a hurry
- All other collisions

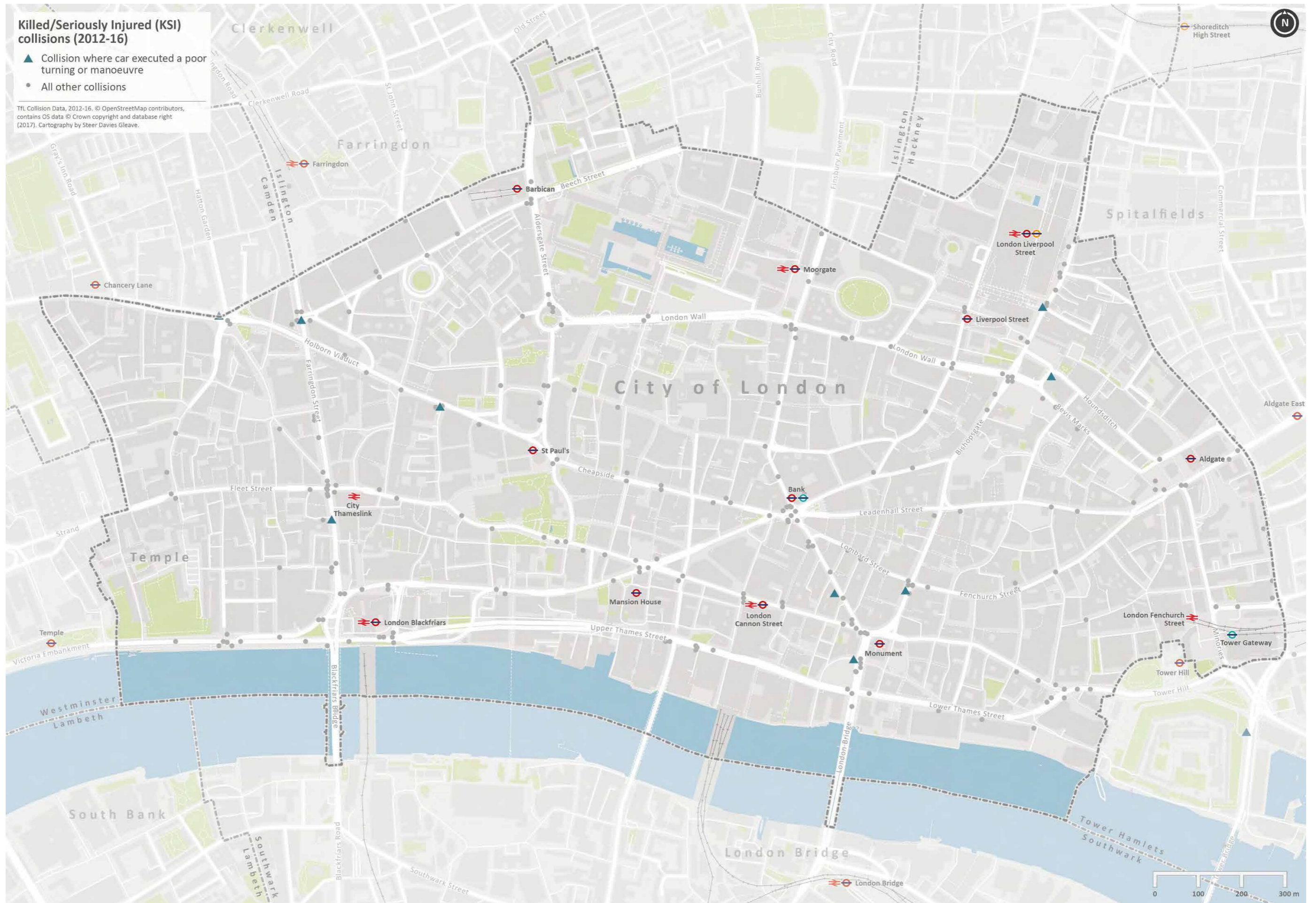
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Killed/Seriously Injured (KSI) collisions (2012-16)

- ▲ Collision where car executed a poor turning or manoeuvre
- All other collisions

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