



CITY STREETS TRAFFIC SURVEY 2019

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August 2020

Executive summary

This report provides an overview of the findings from the City of London:

- 2019 City Streets traffic survey
- 2019 speed survey

Biennial traffic survey key findings

The City Streets traffic survey – conducted roughly every other year since 1999 – provide details of the volumes and types of modes using the City's streets. Since 2016 the survey has been conducted over 24hrs rather than 7am – 7pm and since 2017 has counted people walking as well as vehicles.

The most recent traffic survey was conducted on 21 November 2019. This report explores the 2019 count data, examines longer term trends in City traffic, and compares 2019 data to 2017 (City of London Transport Strategy baseline).

The 2019 traffic survey counted more than 1,486,000 individual motor vehicles and pedestrians over the 24-hour count period across an expanded set of 30 sites. People walking accounted for over two-thirds of all observations. Just over 50% of all counted vehicles were cars, taxis and private hire vehicles and people cycling made up 19% of vehicular traffic.

Comparisons with historical data shows volumes for motorised traffic have declined by over 55% since 1999. Cycle volumes have more than quadrupled over the same period. Long term trends of motor vehicle volume reductions and increased numbers of people cycling continued in 2019.

Comparisons between 24-hour 2017 and 2019 data from our fifteen Transport Strategy baseline count sites found that motor traffic volumes continue to decline on City streets. Exceptions include vans and coaches which increased 2% and 71% respectively in 2019. Overall,

motor traffic volumes declined by 7% from 2017 baseline values, freight traffic volumes did not materially change, as the reduction in lorries was offset by an increase in vans. Cycle volumes increased 11%.

The majority of cars and private hire vehicles and nearly two-fifths of taxi volumes are observed on our streets at night (19:00-07:00). In contrast, over four-fifths of total cycle volumes are observed on our streets during the daytime. Approximately two-thirds (64%) of all vehicle traffic was observed during daytime hours. Data suggests there were more people walking than driving motor vehicles on City streets between 07:00 and 22:00.

Peak and off-peak motor traffic count comparisons found that there was no material change in peak versus off-peak freight traffic proportions or volumes compared to 2017.

Speed survey key findings

The City of London undertook a speed sampling survey in the late autumn and early winter of 2019. The survey consisted of capturing vehicle speeds at 65 sites across the Square Mile for 7 days. The results of that study showed:

- Average speeds across the majority of City streets were below 15mph between 7:00 and 19:00
- Speeding was observed more often outside peak hours on all streets and across the 24-hour period on some 20mph limit streets (at the time of the survey parts of the TLRN in the City were still 30mph)
- Street and junctions with higher observed rates of people being killed or seriously injured have higher rates of speeding outside peak hours
- A handful of junctions have much higher rates of speeding than the City average

1

Introduction

Introduction

Traffic composition survey count overview

The City Streets traffic survey – conducted roughly every other year since 1999 – provide details of the volumes and types of modes using the City’s streets. Since 2016 the survey has been conducted over 24hrs rather than 7am – 7pm and since 2017 has counted people walking as well as vehicles.

The most recent traffic survey was conducted on 21 November 2019. This report explores the 2019 count data, examines longer term trends in City traffic, and compares 2019 data to 2017 (the City of London Transport Strategy key performance indicator baseline).

Uses and limitations

While the City Streets traffic survey provides a comprehensive estimate of City-wide traffic composition, the surveys do not represent a ‘cordon count’ and should not be considered a comprehensive count of all City traffic. Instead, the data is used to identify trends across sample years and to compare proportions of different types of traffic between sites and between surveys from different years.

Modes recorded

Vehicular traffic was counted at all sites and recorded in a standard count database. Count data was recorded in 15 minute intervals by mode and direction. The modes counted are.

- *Private Car* – includes both private hire/minicab vehicles (e.g. Uber and Addison Lee).
- *Taxi* – ‘Black Taxicabs’.
- *Motorcycle* – includes motorcycles and mopeds. Does not include electric cycles.
- *Light Goods Vehicle (LGV)*– includes all goods vehicles up to 3.5 tonnes gross vehicle weight, and all car delivery vans.

- *Heavy Goods Vehicle (OGV1 & OGV2)* – Includes all rigid vehicles over 3.5 tonnes gross vehicle weight with two or more axles. OGV1 specifically refers to all rigid vehicles over 3.5 tonnes gross vehicle weight with two or three axles, and OGV2 specifically refers to rigid vehicles with four or more axles and all articulated vehicles.
- *Buses and coaches* – includes TfL buses, coaches, and tourist buses/open-top buses.
- *Pedal cycle* – includes all personal, dockless cycle hire (i.e. Ofo, Mobike), and TfL Cycle Hire (Santander) cycles.

Pedestrian counts were also undertaken in 2019 and distinguish between direction of travel and side of road used.

Table of contents

Trends and comparisons	Page 5
2019 count data analysis	Page 11
2019 speed data analysis	Page 22

Introduction

Count locations

The City Streets traffic survey began in 1999 and recorded vehicular traffic flows at the following twelve sites:

- New Bridge Street at Tudor Street
- New Change at Festival Gardens
- Queen Street south of Cheapside
- Queen Victoria Street west of Bucklersbury
- King William Street at Abchurch Lane
- Gracechurch Street north of Lombard Street
- Beech Street at Whitecross Street
- London Wall at Bassishaw Highwalk
- Gresham Street east of Basinghall Street
- Poultry west of Grocers' Hall Court
- Wallbrook at Dowgate Hill
- Upper Thames east of Queen Street Place

Additional sites were added to the survey in 2007, including:

- Mark Lane south of Hart Street
- Old Broad Street at Great Winchester Street
- Long Lane east of Lindsey Street

Another 15 sites were added to the 2019 count, including:

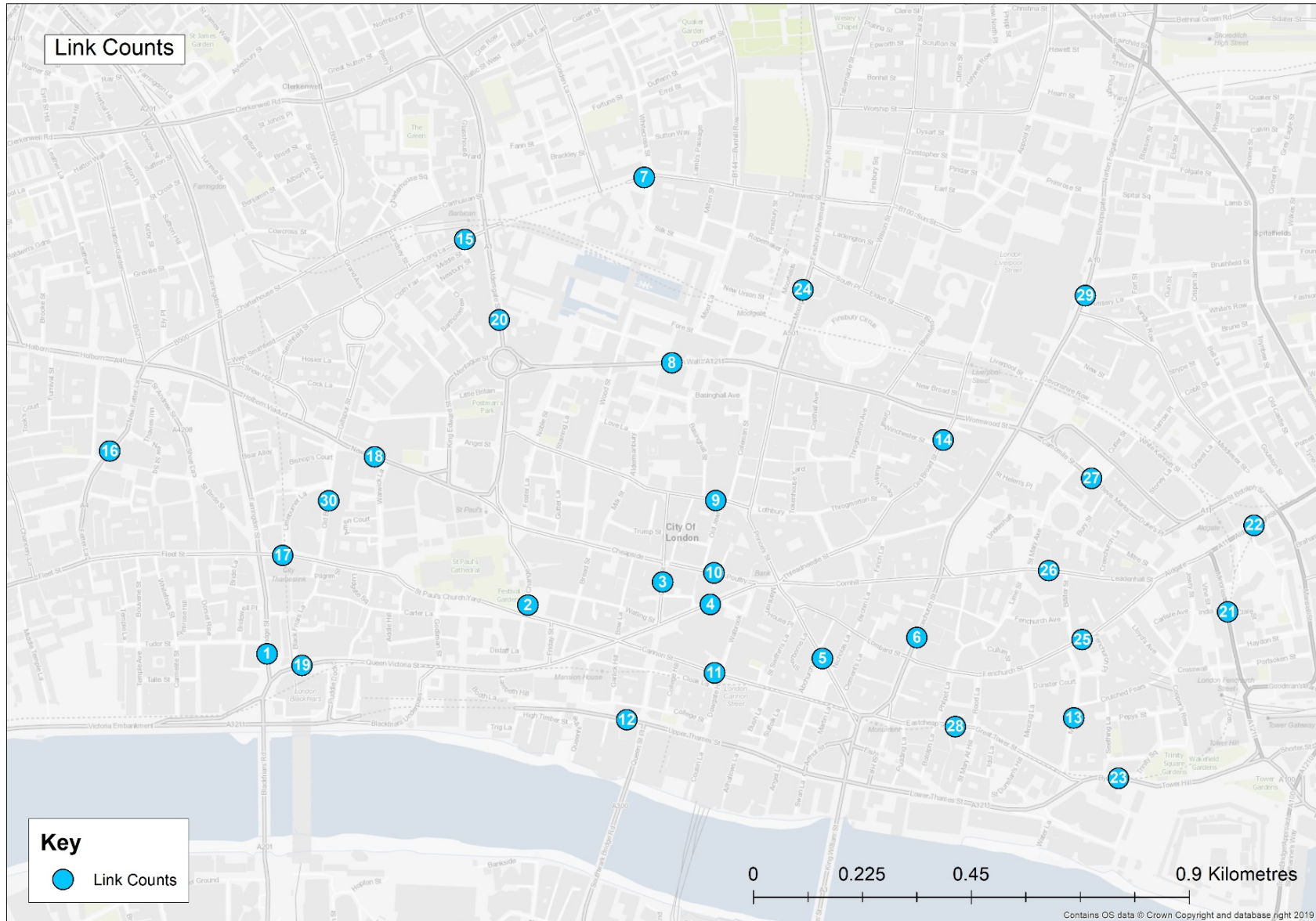
- New Fetter Lane north of Bream's Buildings
- Ludgate Hill west of Limeburner Lane
- Newgate Street east of Old Bailey
- Queen Victoria Street east of Blackfriars Lane
- Aldersgate Street north of London Wall
- Minories south of India St

- Aldgate High Street west of Middlesex St
- Byward Street west of Great Tower St
- Moorgate south of South Place
- Fenchurch St west of Fenchurch Place
- Leadenhall Street east of St Mary's Axe
- Bevis Marks west of Bury Street
- Eastcheap west of Rood Lane
- Bishopsgate north of Middlesex Street
- Old Bailey south of Limeburner Lane

Counts were conducted over a 12-hour period (07:00 to 19:00) in both directions between 1999 and 2014. In 2016, counts were extended to a full 24-hour period. The number of people walking has been recorded since 2017.

More information on the City of London traffic composition survey counts is available by emailing citytransportation@cityoflondon.gov.uk.

Figure 1.1 Locations of 2019 City streets traffic survey sites



2

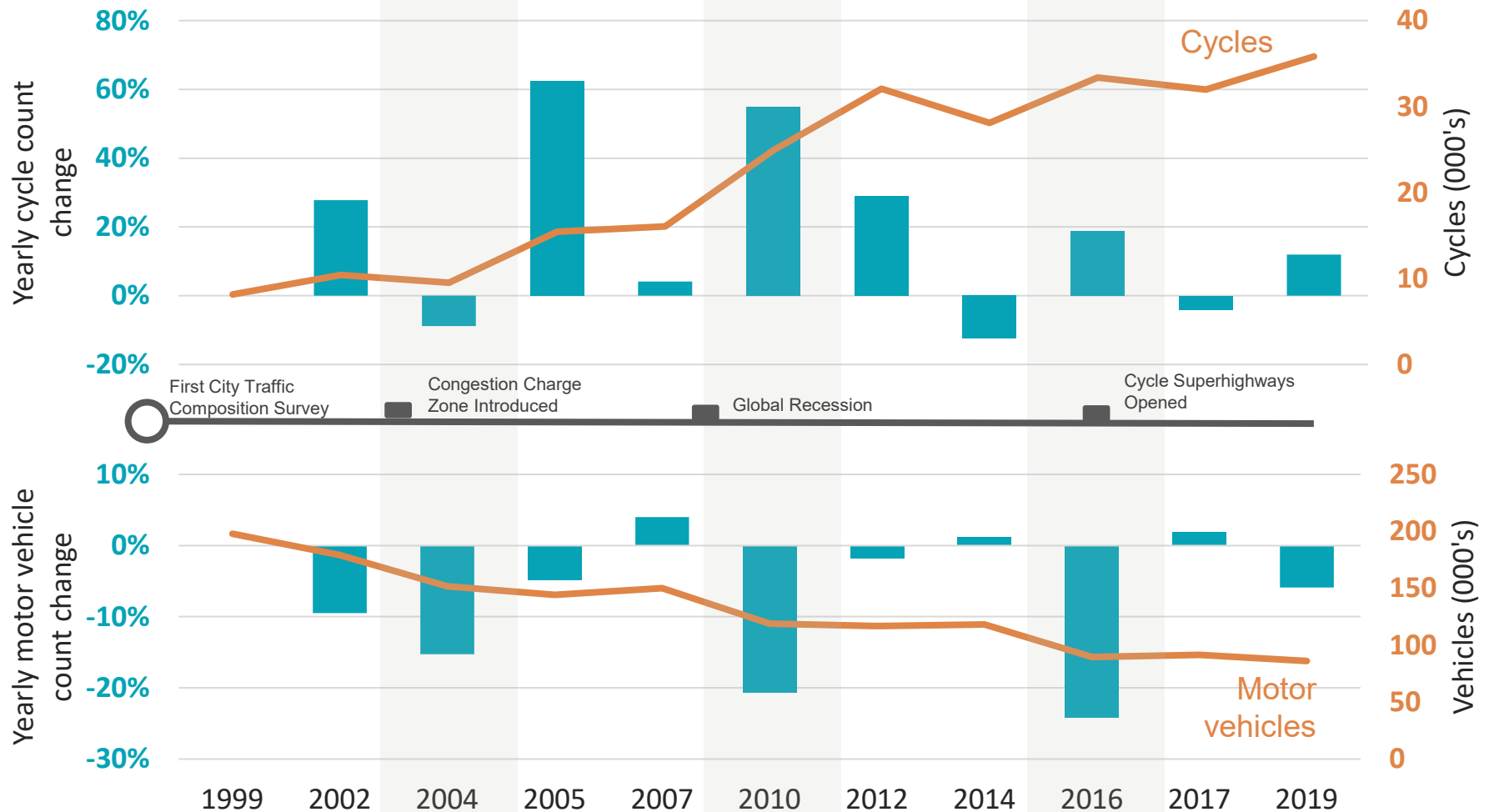
Trends and comparisons

Trends and comparisons

Trends in motor vehicle and cycle volumes

Daytime (07:00-19:00) traffic counts for the City's original twelve count sites began in 1999 and have been recorded on average every two years since. Comparing motor and cycle traffic volumes recorded at these twelve count sites highlights the change in vehicle volumes on City streets over the last three decades. The figure below plots the yearly change in motor vehicle or cycle volumes (blue bars) and their absolute count volumes (orange lines).

Figure 2.1 Change in yearly day-time vehicle counts across the City (7:00-19:00, 12 sites)



Trends and comparisons

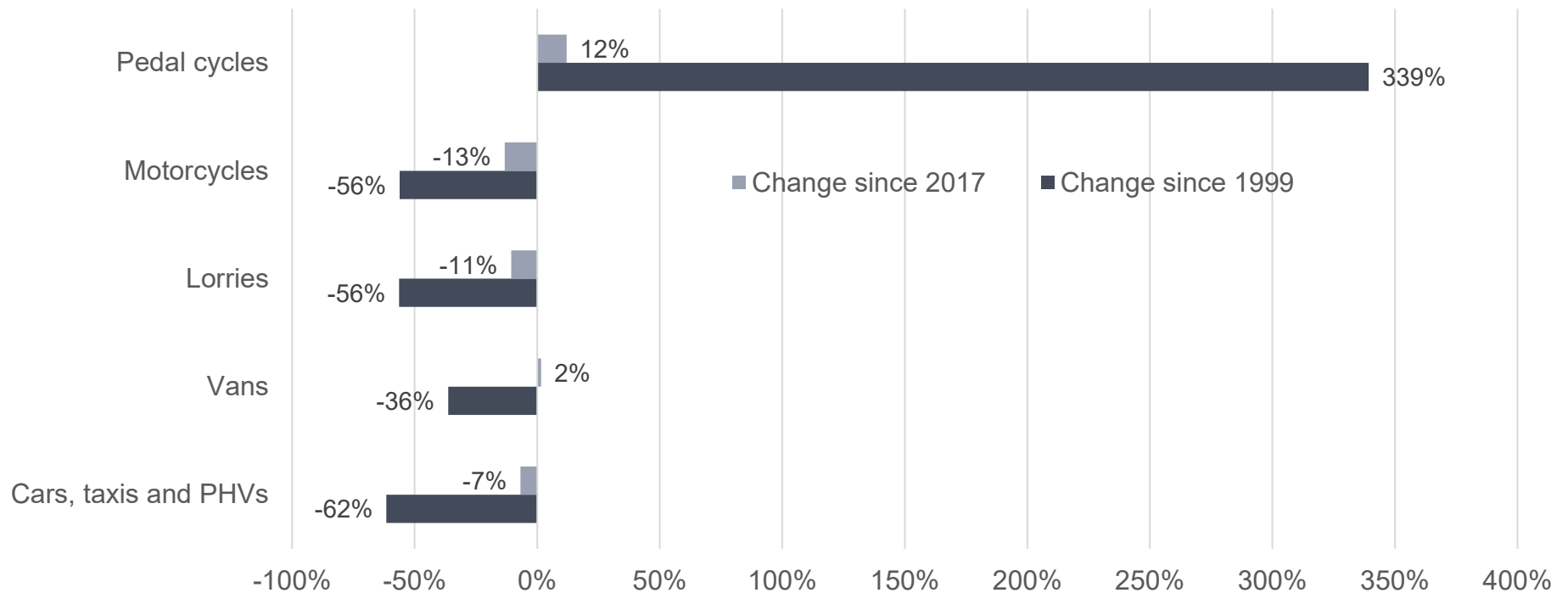
Comparison of count data against historical values

Motor traffic volumes have declined by over 55% across the City since 1999. Cycle volumes have more than quadrupled over the same period (Figures 2.2 and 2.3).

Comparing 2019 count data to the 2017 count baseline data used to inform the City of London Transport Strategy's key performance indicators finds that van and pedal cycle volumes have increased, while volumes of all other modes have decreased. While the data below only covers the City's original twelve count sites, the trend continues when including other counts sites (Figure 2.4).

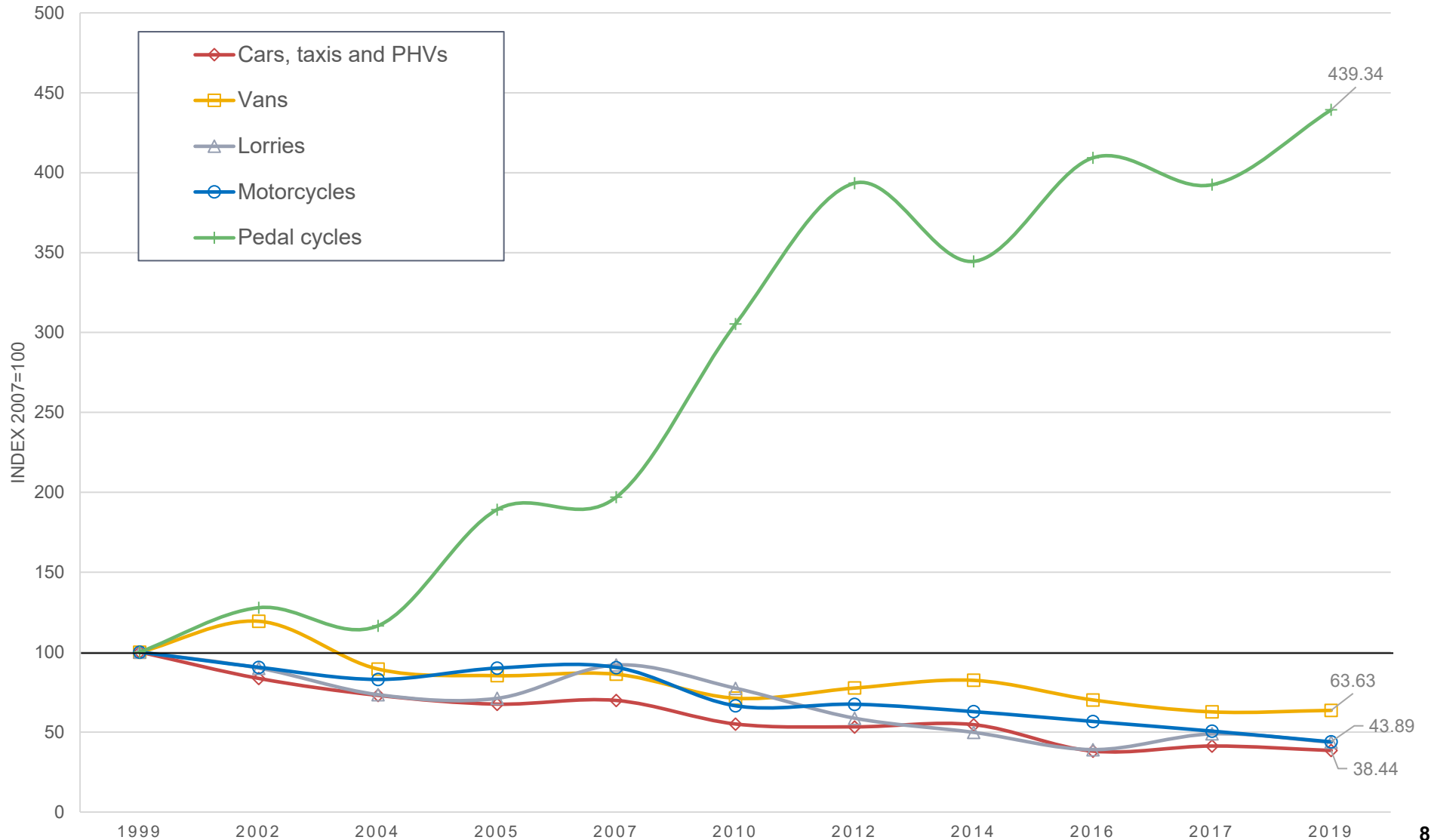
Not shown here are data on buses and coaches. Count data for these modes are included in upcoming sections.

Figure 2.2 Percentage change in day-time vehicle counts across the City since 2017 and 1999 (07:00-19:00, 12 sites)



Trends and comparisons

Figure 2.3 Change in day-time vehicle counts across the City, indexed to 1999 values (07:00-19:00, 12 sites)



Trends and comparisons

Comparison of 2019 count data to Transport Strategy baseline (2017) count data

Counts undertaken since 2016 have collected a more detailed breakdown of modes, and have collected data over 24-hours. These additional modes, including people walking and different cycle types, better capture how people move on City streets.

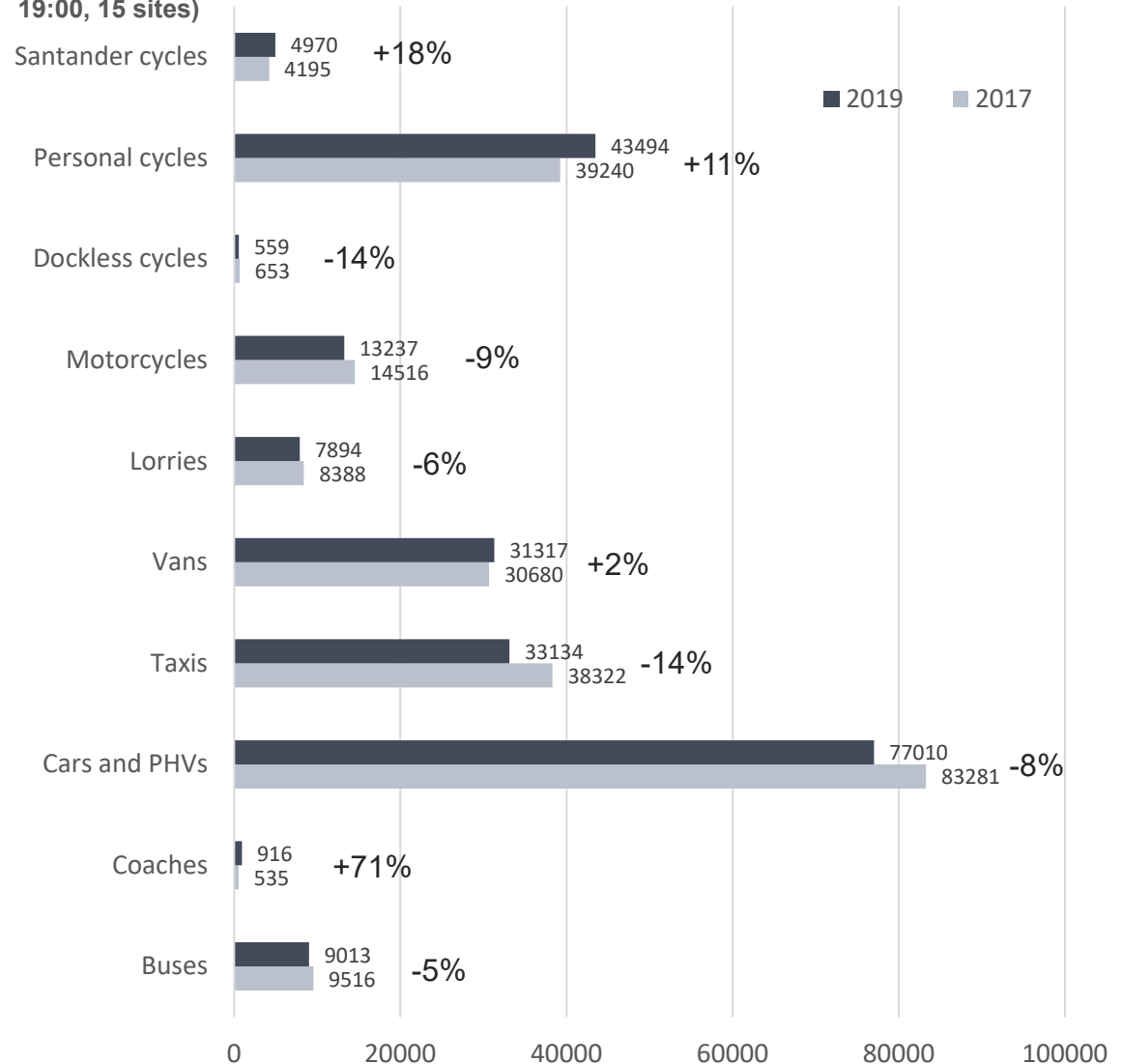
Comparisons between 24-hour 2017 and 2019 data from our fifteen Transport Strategy baseline count sites found that motor traffic volumes continue to decline on City streets. Exceptions include vans and coaches which increased 2% and 71% respectively in 2019.

Overall, motor traffic volumes declined by 7% from 2017 baseline values, freight traffic volumes did not materially change, as the decrease in lorries was offset by an increase in vans. The exceptional increase in coach volumes is unclear but volumes of coaches remain very low.

The number of people cycling increased 11%. The number of people walking on City streets (not shown here to preserve scale) increased 2% from approximately 413,600 to 422,400.

Increases in the volumes of people cycling were not evenly distributed across all cycle types. Volumes of dockless cycles decreased by 14% which could reflect stricter regulation of dockless cycle schemes in the City. Personal and Santander cycle volumes increased after remaining relatively static since 2012, despite counts being undertaken later in the autumn than previous years.

Figure 2.4 Absolute change in day-time vehicle counts across the City by year (7:00-19:00, 15 sites)



Trends and comparisons

Comparison of daytime and night-time counts

Since 2016 City traffic counts have collected data over an entire 24-hour period. These counts allow for a better understanding of how different modes use our streets over time.

The majority of cars and private hire vehicles and nearly two-fifths of taxi volumes are observed on our streets at night (19:00-07:00). In contrast, over four-fifths of total cycle volumes are observed on our streets during the daytime. Approximately two-thirds (64.1%) of all vehicle traffic was observed during daytime hours.

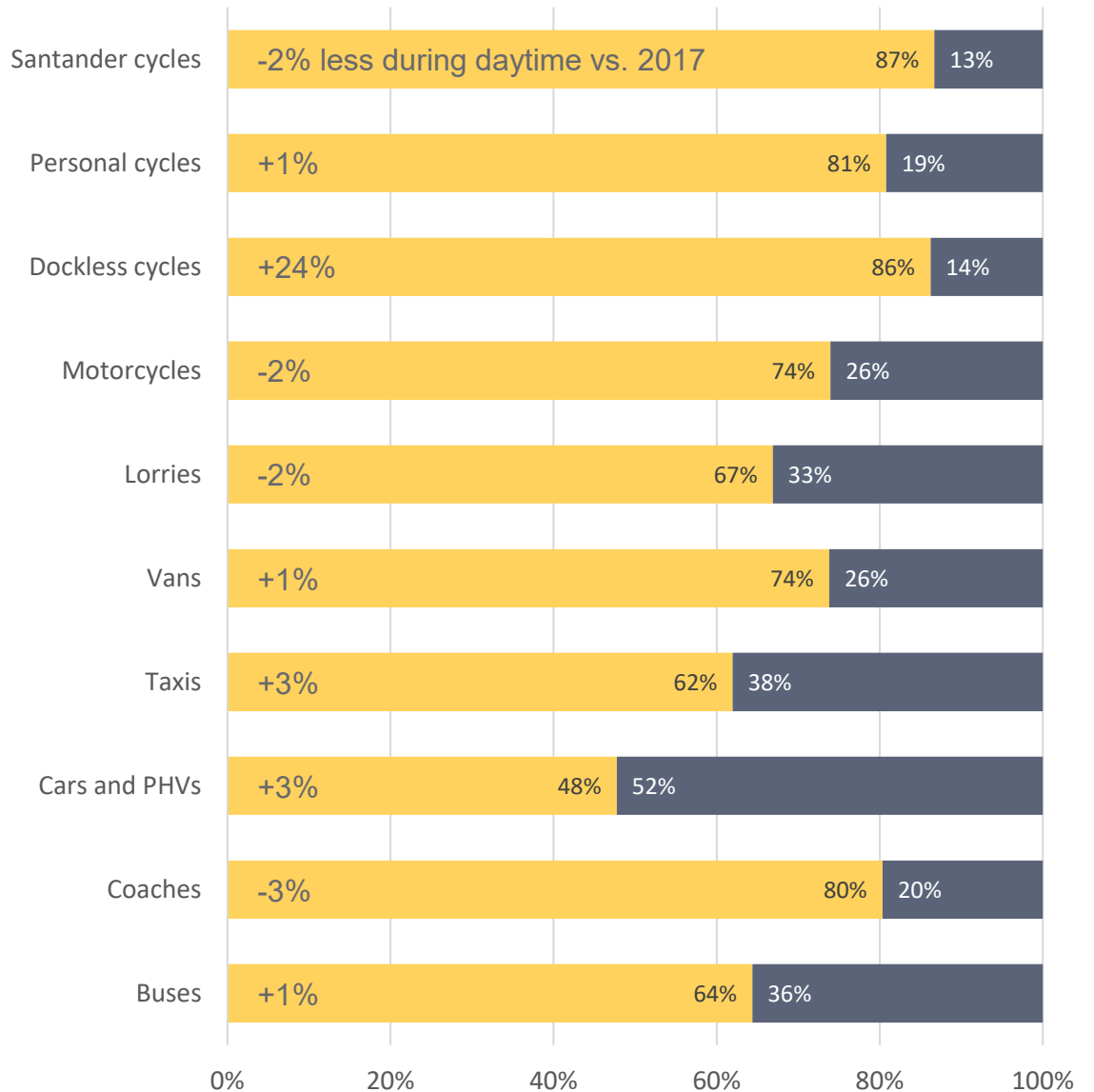
Changes in daytime motor and cycle traffic volumes from 2017 are overlaid on the figure at right. These values show the increase or decrease in the proportion of all traffic of a particular mode counted during daytime hours.

A significant increase in the daytime proportion of dockless cycles was observed between 2017 and 2019, which could reflect changes to dockless operations and regulations in the City.

Small increases in daytime van, taxi, car and private hire vehicle traffic were observed. Proportionally 2.4% more traffic was observed during daytime hours than night-time hours compared to 2017.

Peak and off-peak motor traffic count comparisons (not shown in this document but available by request) found no material change in peak versus off-peak freight traffic proportions or absolute volumes when compared to 2017 data.

Figure 2.5 Comparison of daytime and night-time traffic counts (15 sites)



3

Traffic count data analysis

Traffic count data analysis

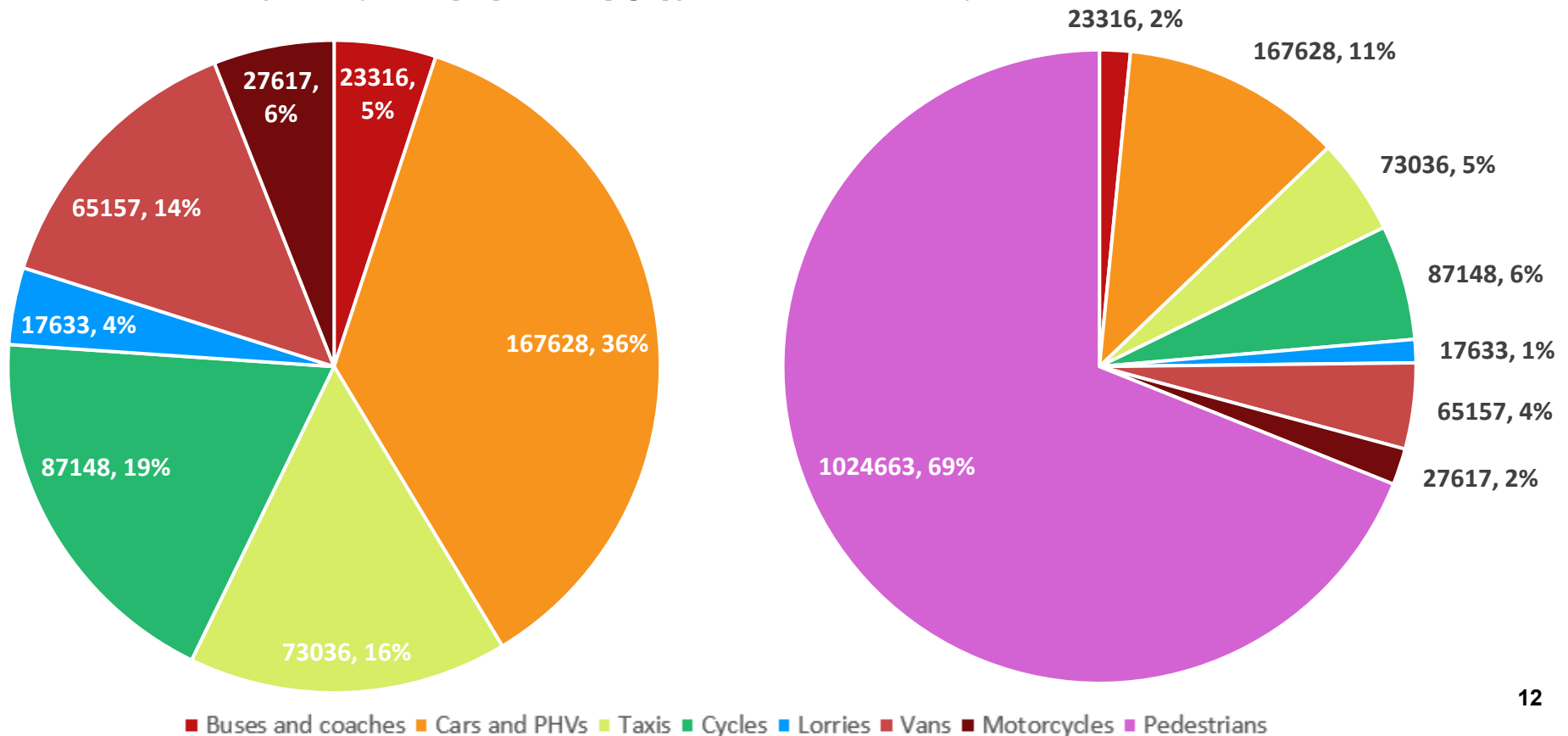
2019 traffic composition

The 2019 traffic survey counted more than 1,486,000 individual motor vehicles and pedestrians over the 24-hour count period across an expanded set of 30 sites. People walking accounted for over two-thirds of all observations. Just over 50% of all counted vehicles were cars, taxis and private hire vehicles and people cycling made up 19% of vehicular traffic.

More cycles were counted than any other single vehicular mode excluding cars and private hire vehicles. Just over 73,000 taxis were counted (shown below grouped together with cars and private hire vehicles).

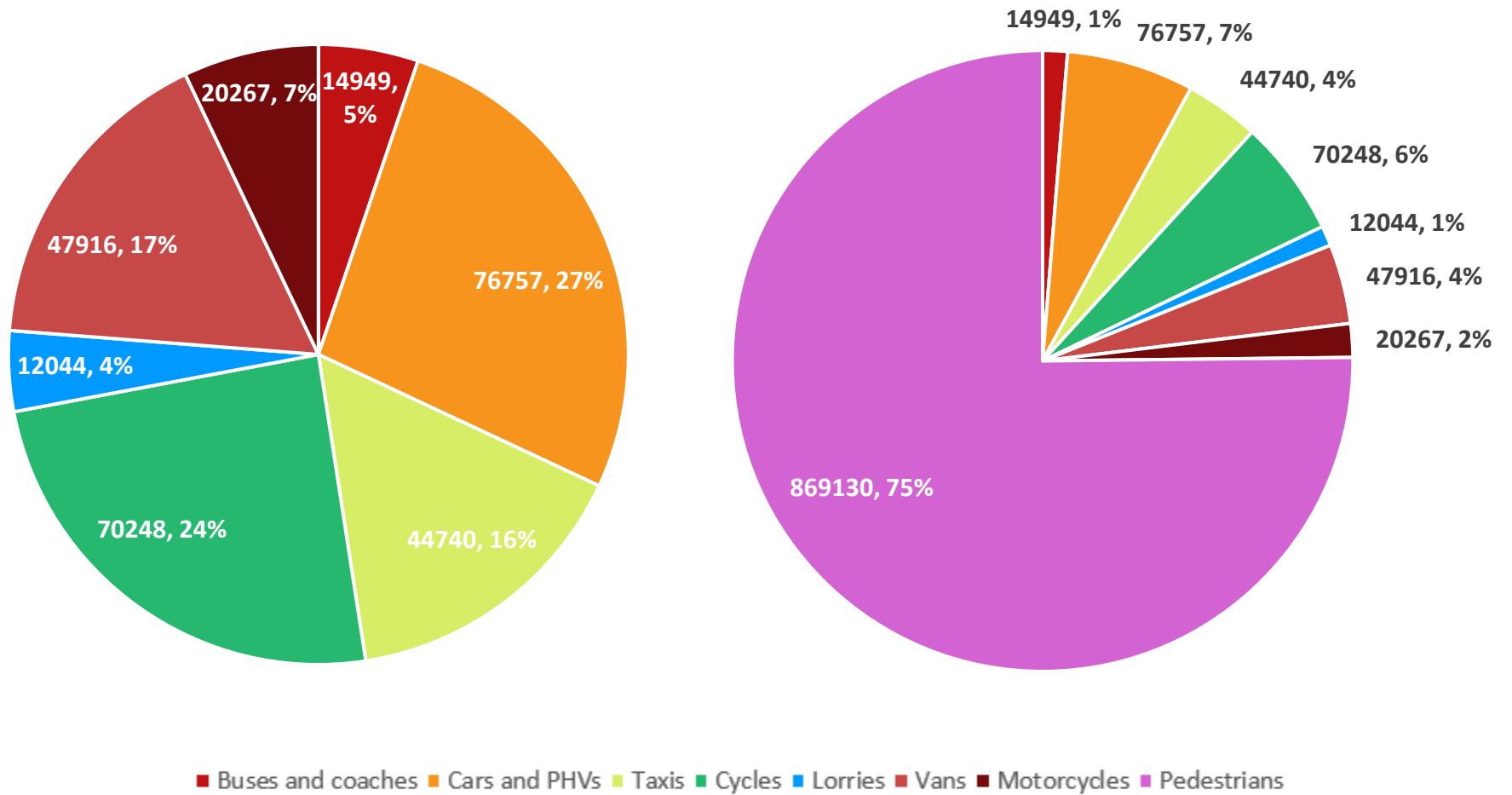
Figures 3.8 to 3.10 show all-day traffic composition by site.

Figure 3.1 24-hour traffic composition (without [left] and with [right] pedestrian counts, 30 sites)



Traffic count data analysis

Figure 3.2 Daytime (07:00-19:00) traffic composition (without [left] and with [right] pedestrian counts, 30 sites)



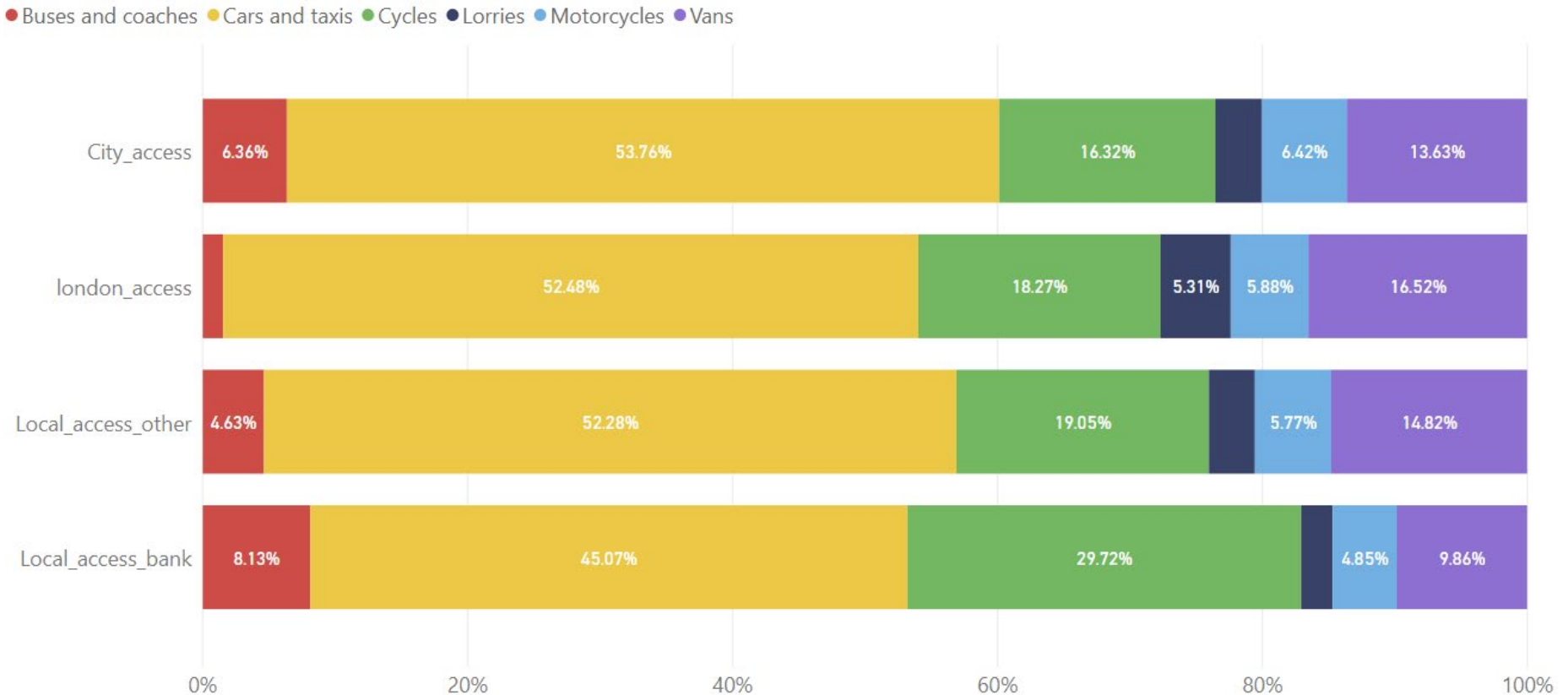
Traffic count data analysis

2019 traffic composition by street type

The City of London Transport Strategy grouped all streets in the Square Mile into one of four types – London access, City access, local access Bank junction area and other local access. The expanded 2019 survey had multiple sites on each street type, making it possible to compare traffic composition across those types and understand whether certain modes were using certain street types more or less often (such as freight vehicles).

Traffic composition varied considerably across street types. Cars, taxis and private hire vehicles made up a higher proportion of traffic on City access streets such as Cannon Street and Bishopsgate than on London access streets such as Farringdon Street. People cycling made up a higher proportion of traffic on London access streets than City access streets, likely due to higher flows on cycle superhighways.

Figure 3.3 24-hour traffic composition by street type (30 sites)



Traffic count data analysis

2019 motor vehicle count time profile

Time profiles of traffic on City streets has previously shown an upper 'bound' to the number of motor vehicles in the City. Shown in Figure 3.5 on the following page, motorised traffic modes appear to reach a cap of roughly 18-19,000 vehicles at 8:00 and remain near those levels throughout the day. Figure 3.6 shows how the composition of those motor vehicles changes considerably over the day, with more freight vehicles in the morning and more cars, taxis and private hire vehicles in the evening.

Cycling, in contrast to motor vehicle traffic, is observed to have two distinct peaks from 07:00 to 10:00 in the morning and from 17:00 to 19:00 in the evening. Numbers of people walking have three distinct peaks and higher volumes between peaks than other modes.

Data in Figure 3.5 suggests there were more people walking than driving motor vehicles observed on City streets between 7:00 and 22:00.

Figure 3.4 Motor vehicle and people cycling counts by hour of day (30 sites)

● Buses and coaches ● Cars and taxis ● Cycles ● Lorries ● Motorcycles ● Vans

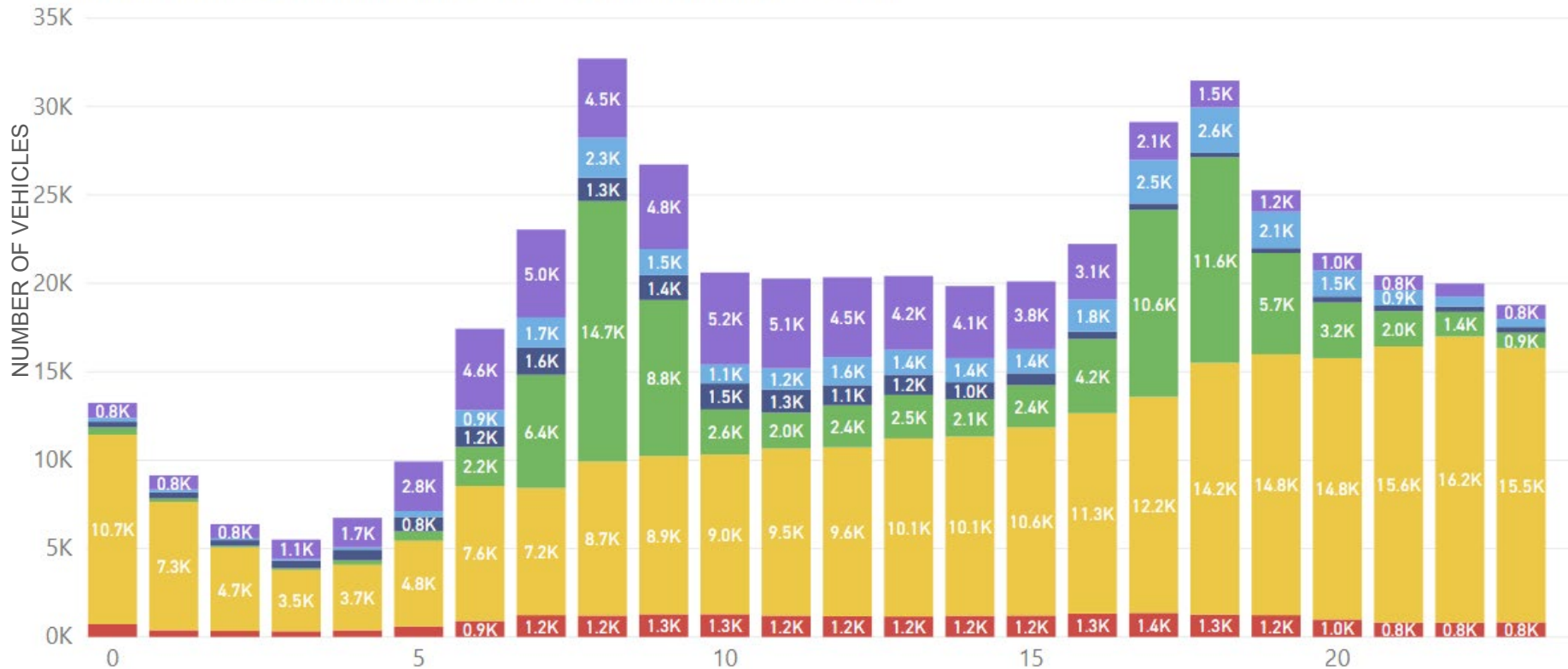


Figure 3.5 Motor vehicle (above) and pedestrian (below) counts by hour of day (30 sites)

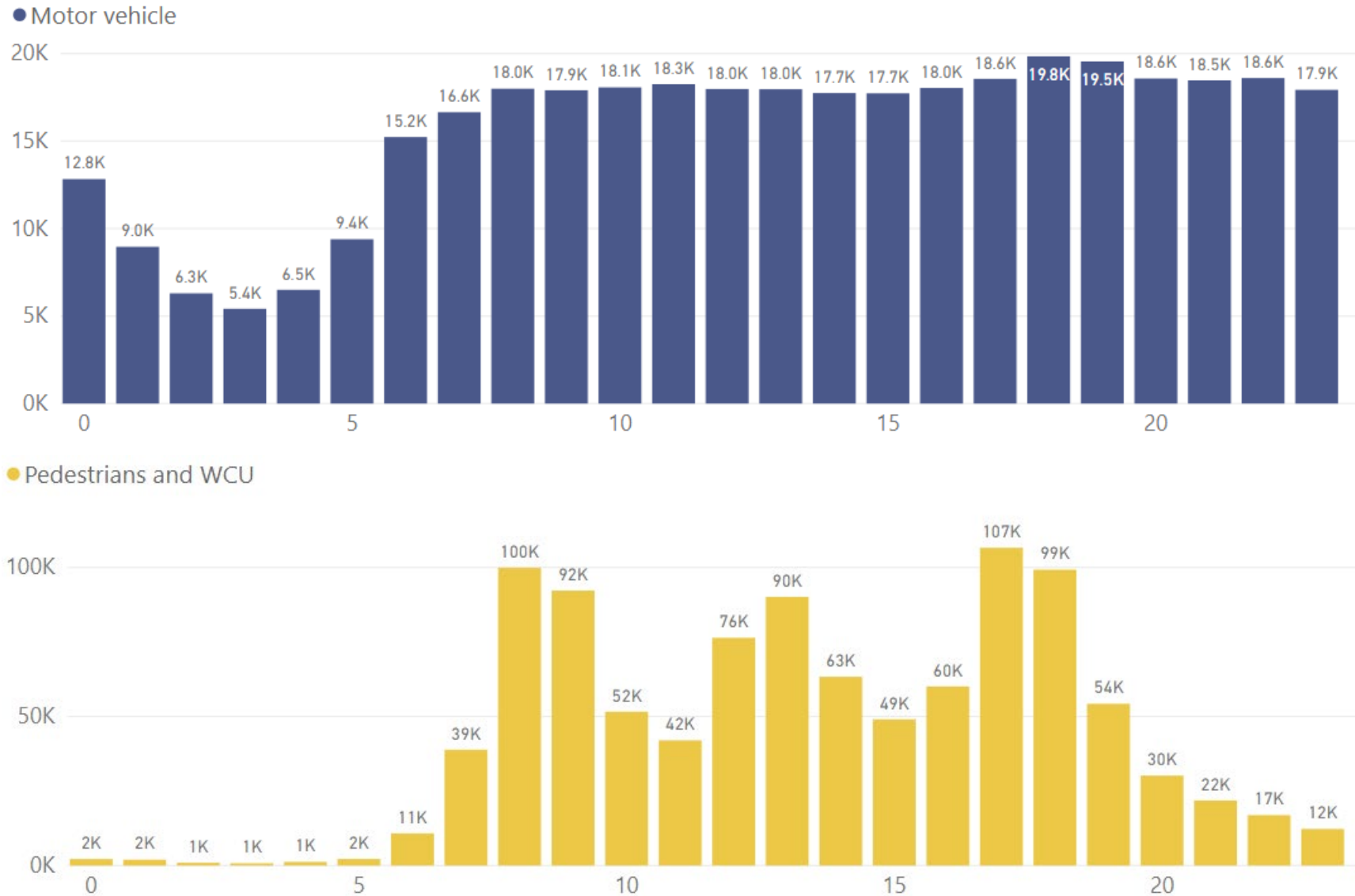
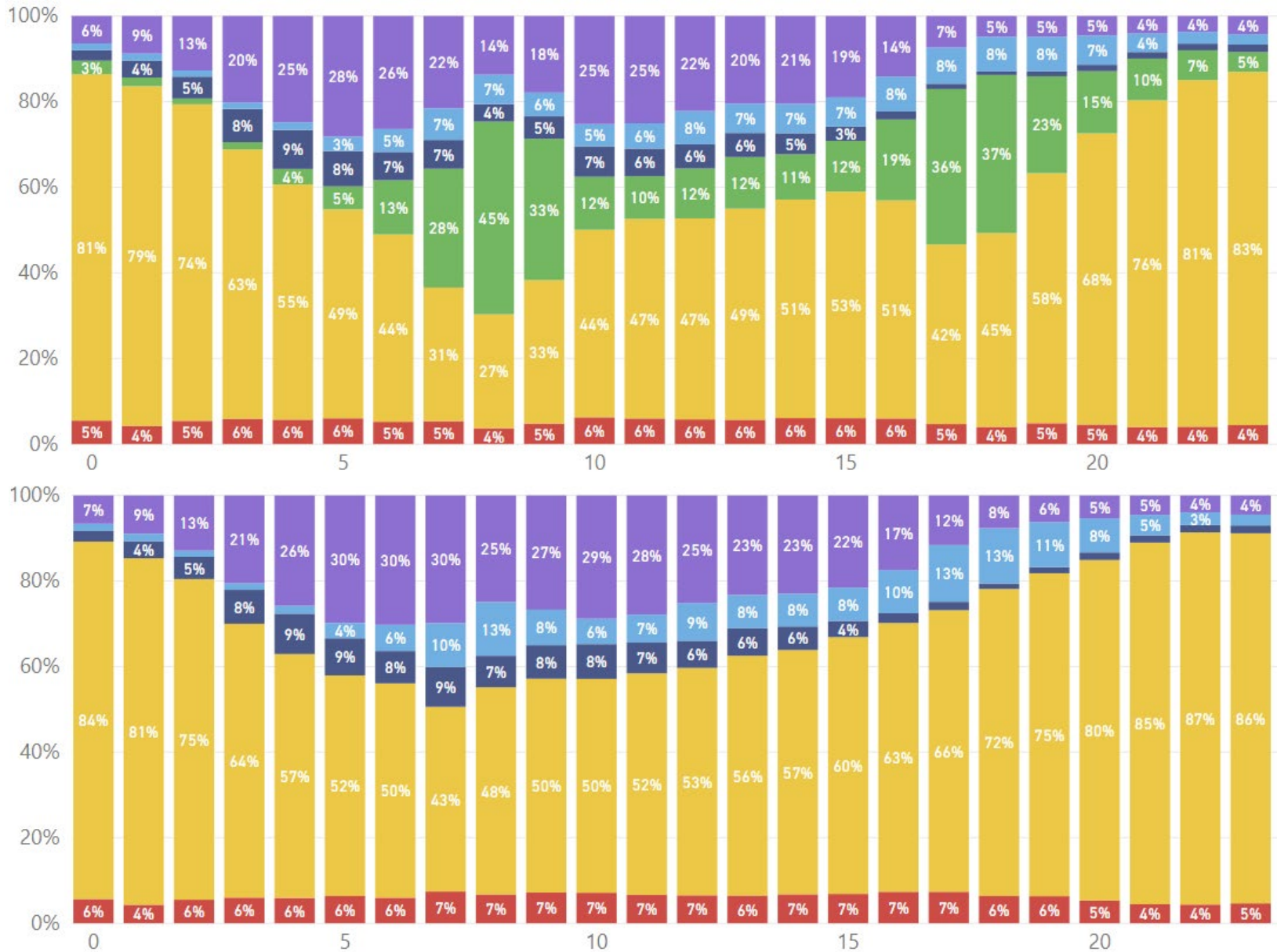


Figure 3.6 Proportions of hourly vehicle traffic with (above) and without (below) cycles (30 sites)

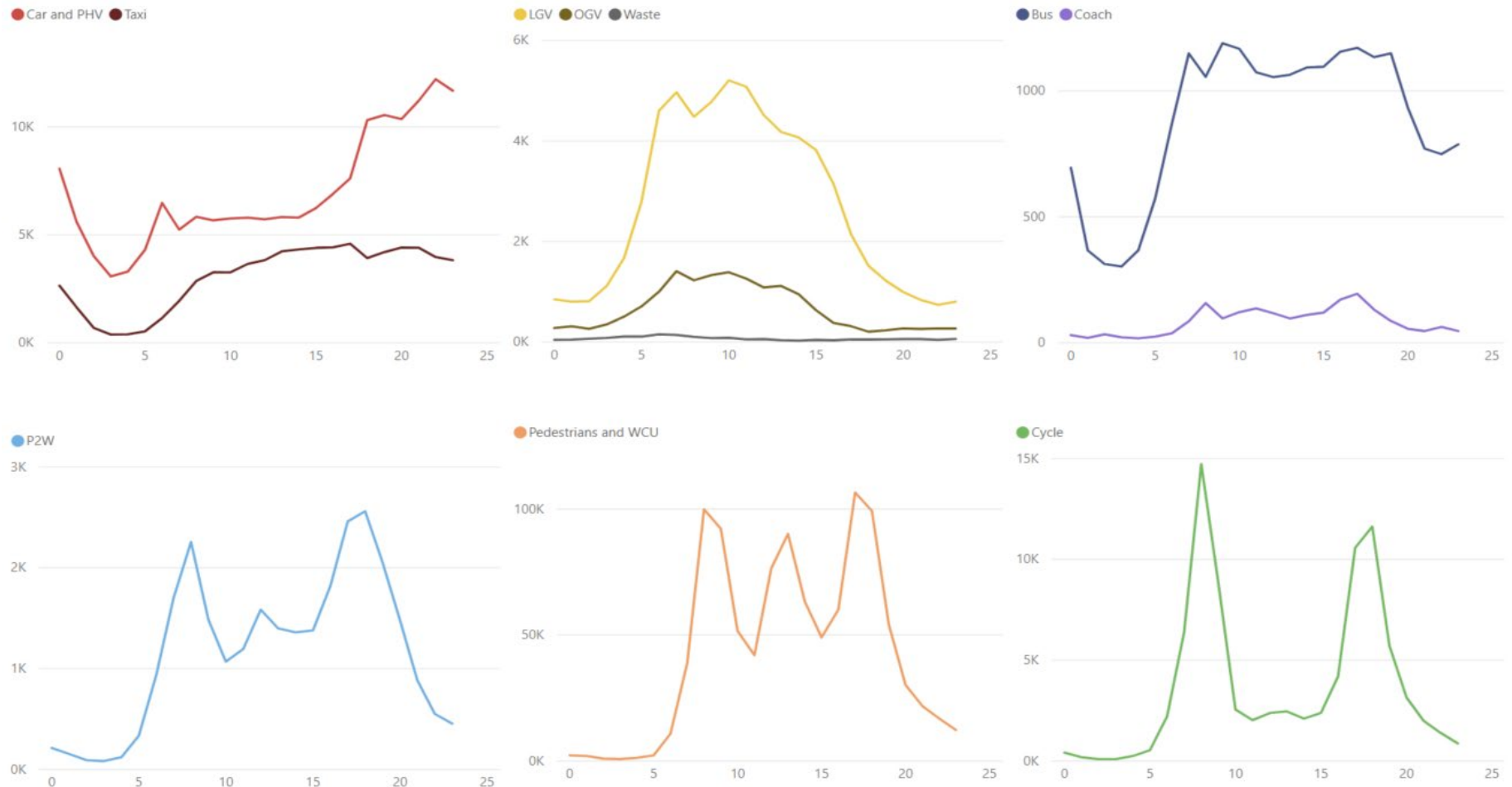
● Buses and coaches ● Cars and taxis ● Cycles ● Lorries ● Motorcycles ● Vans



Traffic count data analysis

Figure 3.7 below shows the all-day time profiles of each mode (note: different scales are used for each graph). Three modes – motorcycles and people walking and cycling – were observed to have peaks during the commuter peak periods. Motorcycle volumes had less defined peaks than those for people walking and cycling suggesting that many motorcycle movements were being made during daytime hours for non-commuting purposes. Goods and services vehicles, particularly vans, were shown to peak in the morning and afternoon and then steadily decline over the rest of the day, reflecting the general profile of freight deliveries observed across London. Cars, private hire vehicles and taxis were observed to peak much later in the evening, suggesting these modes are not used for many commuting trips.

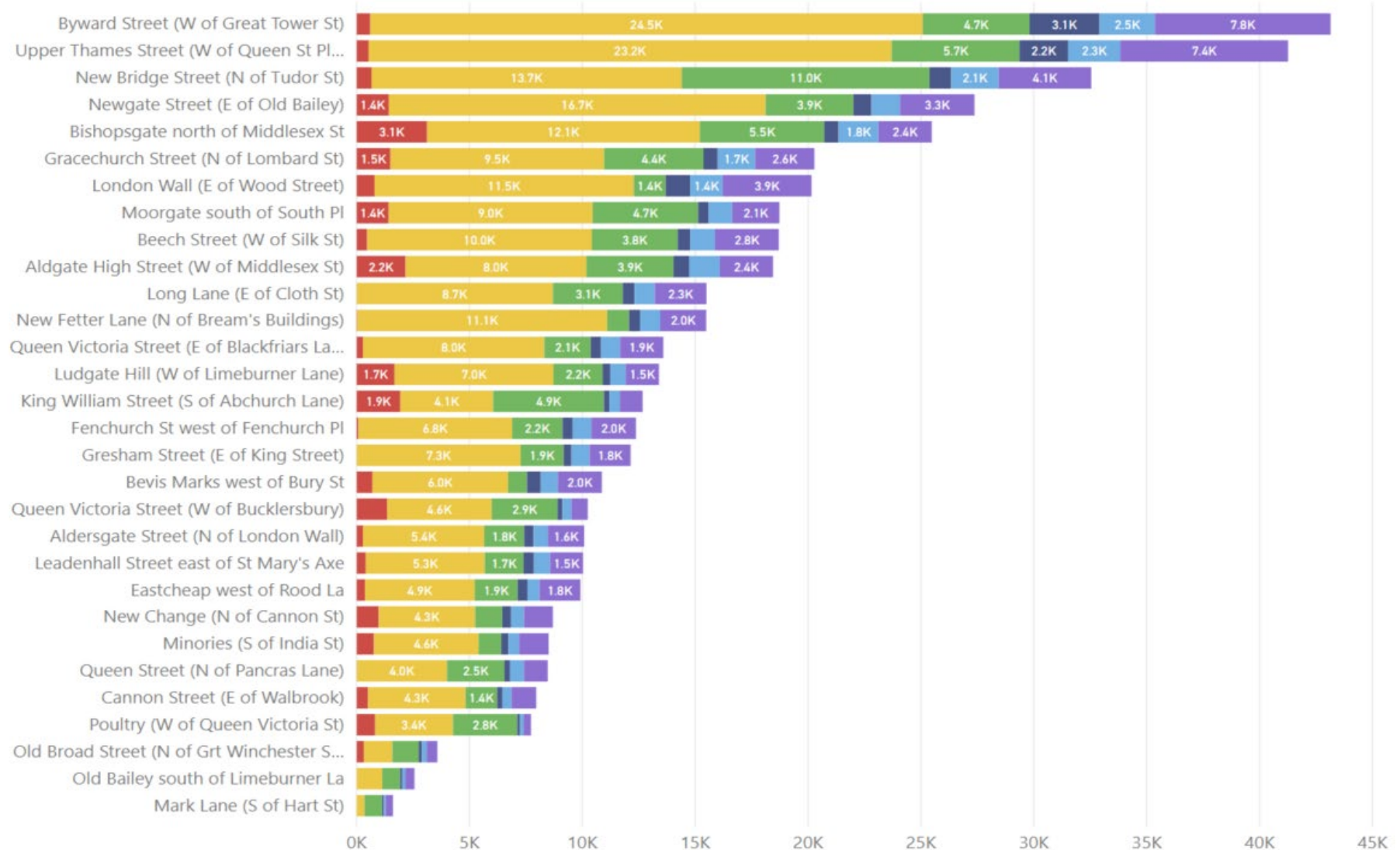
Figure 3.7 24-hour time profiles of all modes (different scales used, 30 sites)



Traffic count data analysis

Figure 3.8 24-hour vehicle traffic composition by count site

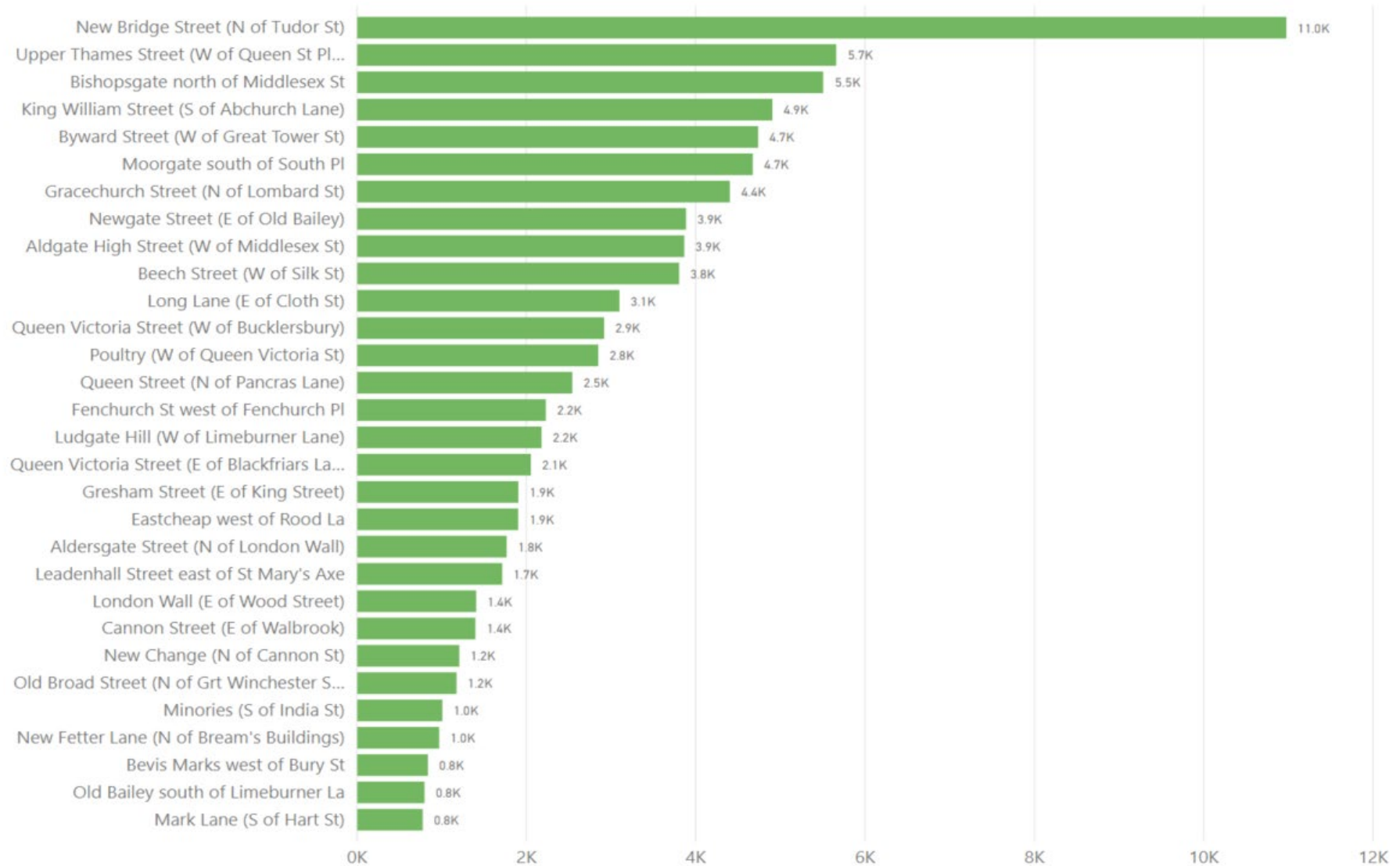
● Buses and coaches ● Cars and taxis ● Cycles ● Lorries ● Motorcycles ● Vans



Traffic count data analysis

Figure 3.9 24-hour cycle traffic by count site

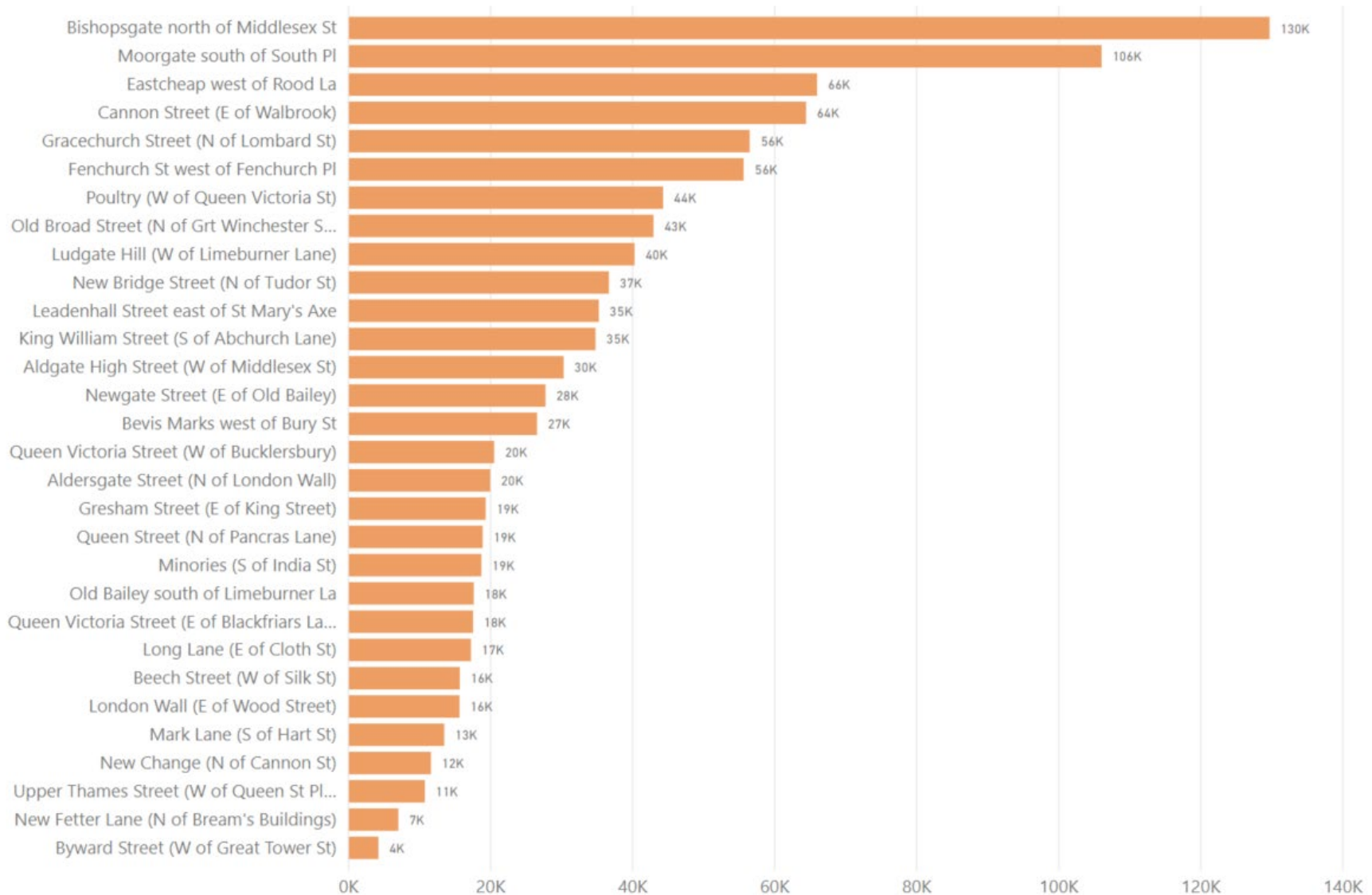
● Cycles



Traffic count data analysis

Figure 3.10 24-hour pedestrian traffic by count site

● Pedestrians and WCUs



4

Speed survey data analysis

Speed survey data analysis

Comparison of count data against historical values

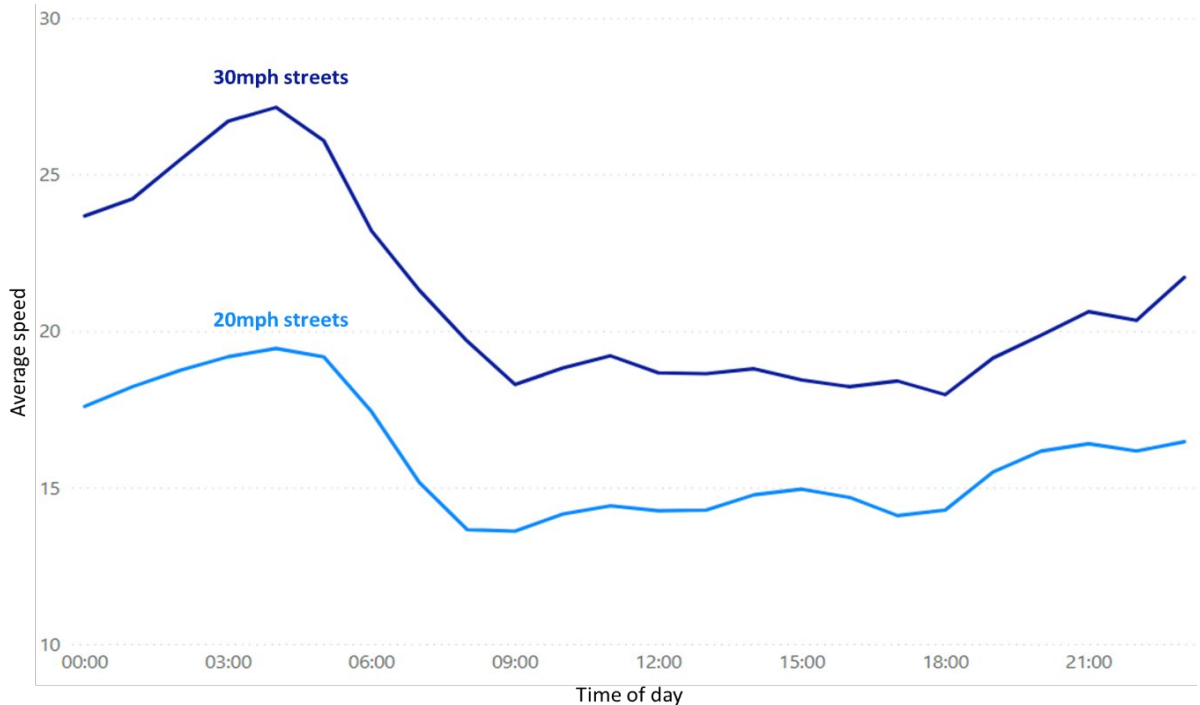
The City of London undertook a speed sampling survey in the late autumn and early winter of 2019. The survey consisted of capturing vehicle speeds at 65 sites across the Square Mile for 7 days. The results of that study showed:

- Average speeds across the majority of City streets were below 15mph between 7:00 and 19:00
- Speeding was observed more often outside peak hours on all streets and across the 24-hour period on some 20mph limit streets (at the time of the survey parts of the TLRN in the City were still 30mph)
- Street and junctions with higher observed rates of people being killed or seriously injured have higher rates of speeding outside peak hours
- A handful of junctions have much higher rates of speeding than the City average

Average speeds

Figure 4.1 shows weekday average observed speeds by hour for all sampled 20mph or 30mph streets. Observed speeds were consistently lower during peak periods and were highest around 4:00.

Figure 4.1: Weekday speeds of 20mph and 30mph streets averaged across all sampled weekdays by hour



Speed survey data analysis

Speeding

Speeding was observed to be a problem on many City streets and especially outside of peak hours. Figure 4.2 shows the proportion of all observed vehicles travelling above the ACPO (Association of Chief Police Officers) enforced speeding threshold of 10% plus 2mph above the posted speed limit. Outside of peak periods up to 20% of all vehicles observed across all sampled 20mph streets were in excess of this limit.

Speeding varied considerably across count sites. A handful of sites were found to have a proportion of all observed vehicles travelling above the ACPO threshold in excess of 20% across the entire day. For the London Wall site this value was above 30% even during peak times and peaked at 76% of all observed vehicles in the early morning. Figure 4.3 shows a visualisation of these proportions across all observed sites.

Figure 4.2: Weekday proportion of observed vehicles travelling above the ACPO limit (10% plus 2mph above posted speed limit) averaged across all sampled weekdays by hour

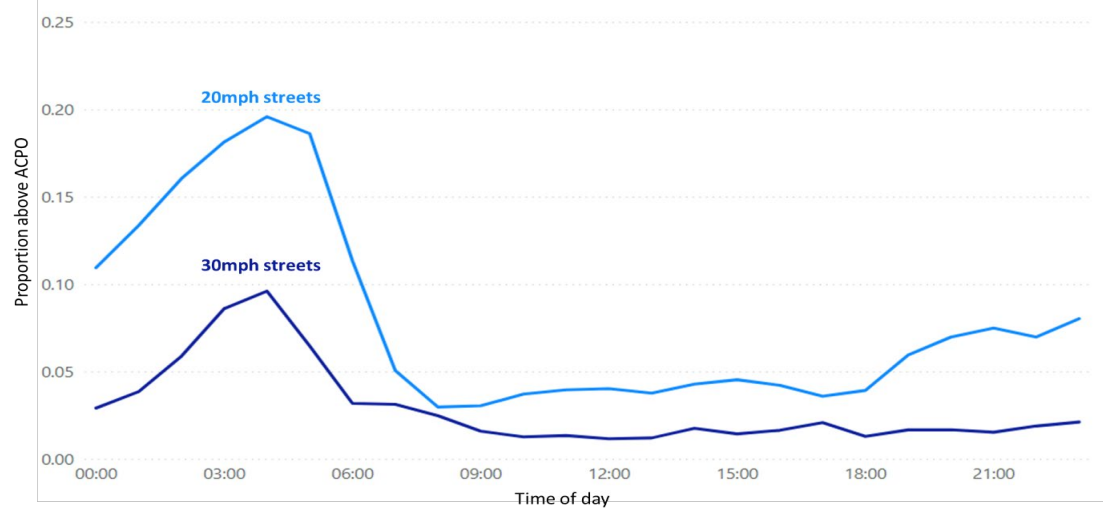
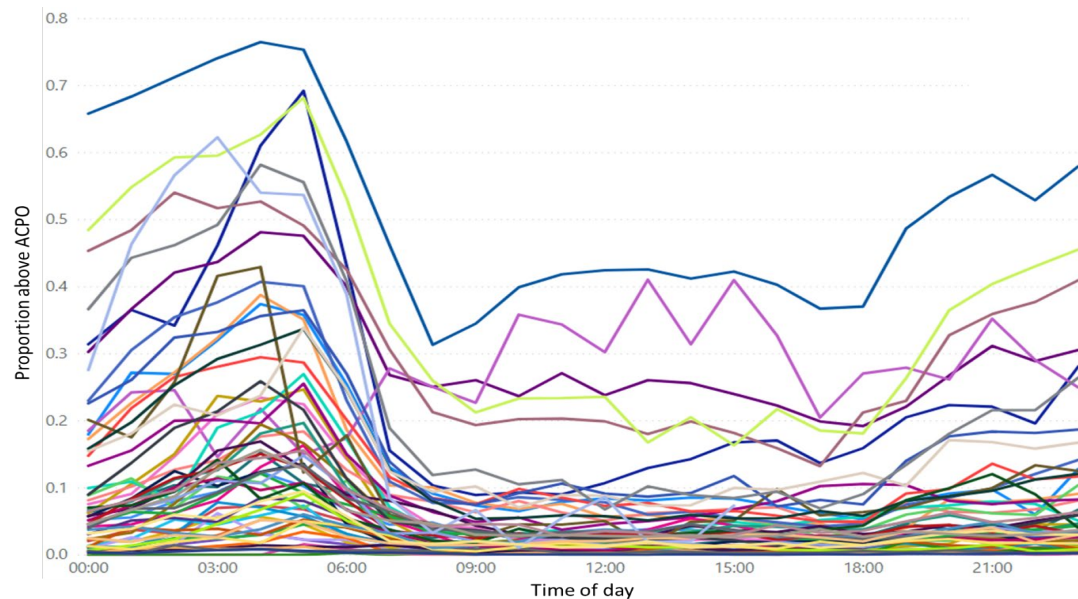


Figure 4.3: Visualisation of the variations in weekday proportion of observed vehicles travelling above the ACPO threshold (10% plus 2mph above posted speed limit) averaged across all sampled weekdays by hour and by site



Speed survey data analysis

Safer Streets comparisons

Streets priorities for road danger-related interventions in the City of London Transport Strategy were found to have slightly higher proportions of observed vehicles travelling above the ACPO threshold outside peak periods and lower proportions during peak periods than other streets (Figure 4.4).

There was significant variation in weekday proportions of vehicles travelling above the ACPO limit between Safer Streets junction clusters (Figure 4.5), with some clusters found to have proportions in excess of 10% during peak times.

Figure 4.4: Weekday proportion of observed vehicles travelling above the ACPO limit (10% plus 2mph above posted speed limit) averaged across all sampled weekdays by hour

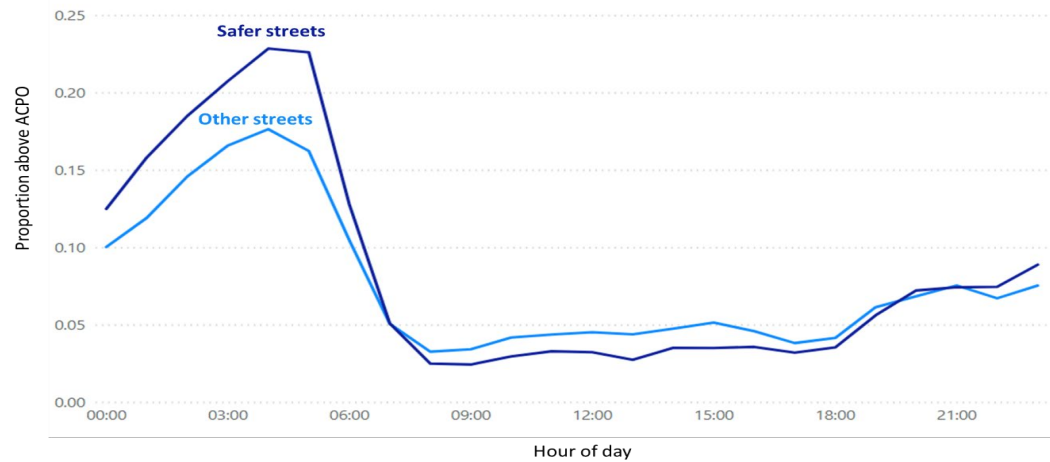


Figure 4.5: Visualisation of the variation in weekday proportion of observed vehicles travelling above the ACPO limit (10% plus 2mph above posted speed limit) averaged across all sampled weekdays by hour and by Safer Streets junction cluster

