



City of London

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# BANK JUNCTION TAXI AVAILABILITY ANALYSIS

Final Report





City of London

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# **BANK JUNCTION TAXI AVAILABILITY ANALYSIS**

Final Report

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# 1

## INTRODUCTION





# 1 INTRODUCTION

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## 1.1 OVERVIEW

Since 2017, a bus and cycle only restriction has been in effect at Bank junction from 7 am to 7 pm, Monday to Friday. This was implemented as an experimental traffic order to predominately address the poor safety record at the junction. This was made permanent in 2018 and complementary interim footway widening was implemented shortly after. The City of London is now midway through completion on the All Change at Bank scheme. This will restrict traffic on three of the six arms of the junction and create a larger area of public realm space at the centre of the junction. The works are due for completion in Spring 2024. The current proposals retain the ‘bus and cycle restriction’ as it is on the remaining three arms, but there has been an ongoing commitment to review the traffic mix and timings.

A review is now being undertaken and the primary consideration for change is whether altering the traffic mix would address concerns about equality and accessibility for people who rely on taxis over those disbenefits for those that use public transport or who walk and cycle.

WSP have been commissioned by the City to undertake a comprehensive analysis around the availability of taxis, and to ascertain if Bank and the wider TfL Bishopsgate restrictions are negatively impacting the level of taxi provision in the City. Part of this work includes a comparison with taxi availability in the West End.

This final report includes analysis of the availability of taxis in terms of:

- Taxi rank usage – surveys at nearly 30 sites in the City to assess how frequently these are used by taxis, and frequency of rides being hailed from a rank;
- Ride hailing apps – determining wait time for private hire and black cab services over a 14 hrs period at a number of locations in the City;
- A comparison with traffic classification count survey from Westminster – assessing trends in taxi volumes over the past five years and proportions of taxis in the traffic mix;
- Taxi availability surveys – number of taxis passing at a number of locations in the City and if they had their lights on or off; and
- Journey times comparison – assessing variation in driving times using different routes via Bank Junction; Bishopsgate, and the fastest route on a travel planning app.

Human behaviour and decision-making play a significant role in taxi operations. Data alone cannot fully account for the unpredictability of passenger demand on a particular day, breaks had by taxi drivers, the impact of special events, weather, and changes to junction signal timings may have on taxi usage. These human-driven factors introduce a level of complexity and uncertainty that may not be fully represented in our dataset.

Analysis has been undertaken through a mix of site-specific analysis and breaking the City of London into ‘areas’. These consist of Bank sites grouped together to inform detailed



analysis, with other sites grouped into North, East, and West to make comparisons across different parts of the City. Data collection locations are shown in Figure 1-1 and Figure 1-2 below.

Since data collection occurred in the City for this report, changes have occurred to the bus gate restrictions at Cheapside. In early November the restrictions were amended to allow taxis to travel through it and along Cheapside. This was not the case on the dates we have analysed whereby taxis needed to turn off Cheapside in advance of the restrictions. Therefore data from Cheapside in this report is likely to not reflect the current on-street situation.

Throughout this report, a multi-chart format has been utilised to effectively show Bank Junction restriction time frames and additional data points within a singular chart.

The background of the chart features a blue bar graph, to highlight the time frame spanning from 7 am to 7 pm that traffic restrictions in Bank Junction are in place. Simultaneously, overlaid on this backdrop is a line graph, plotted to showcase a separate dataset, representing the observed patterns or trends in the data.

However, a visual discrepancy occurs whereby the blue bars extend beyond the intended restriction hours, intruding into non-restricted time intervals. This anomaly arises due to the positioning of each data point represented by the line graph, which aligns centrally within the corresponding hour segments of the bar graph. Consequently, this may inaccurately suggest that the imposed restrictions extend beyond the specified timeframe.

Figure 1-1 - Data collection locations in City of London for data within the Report

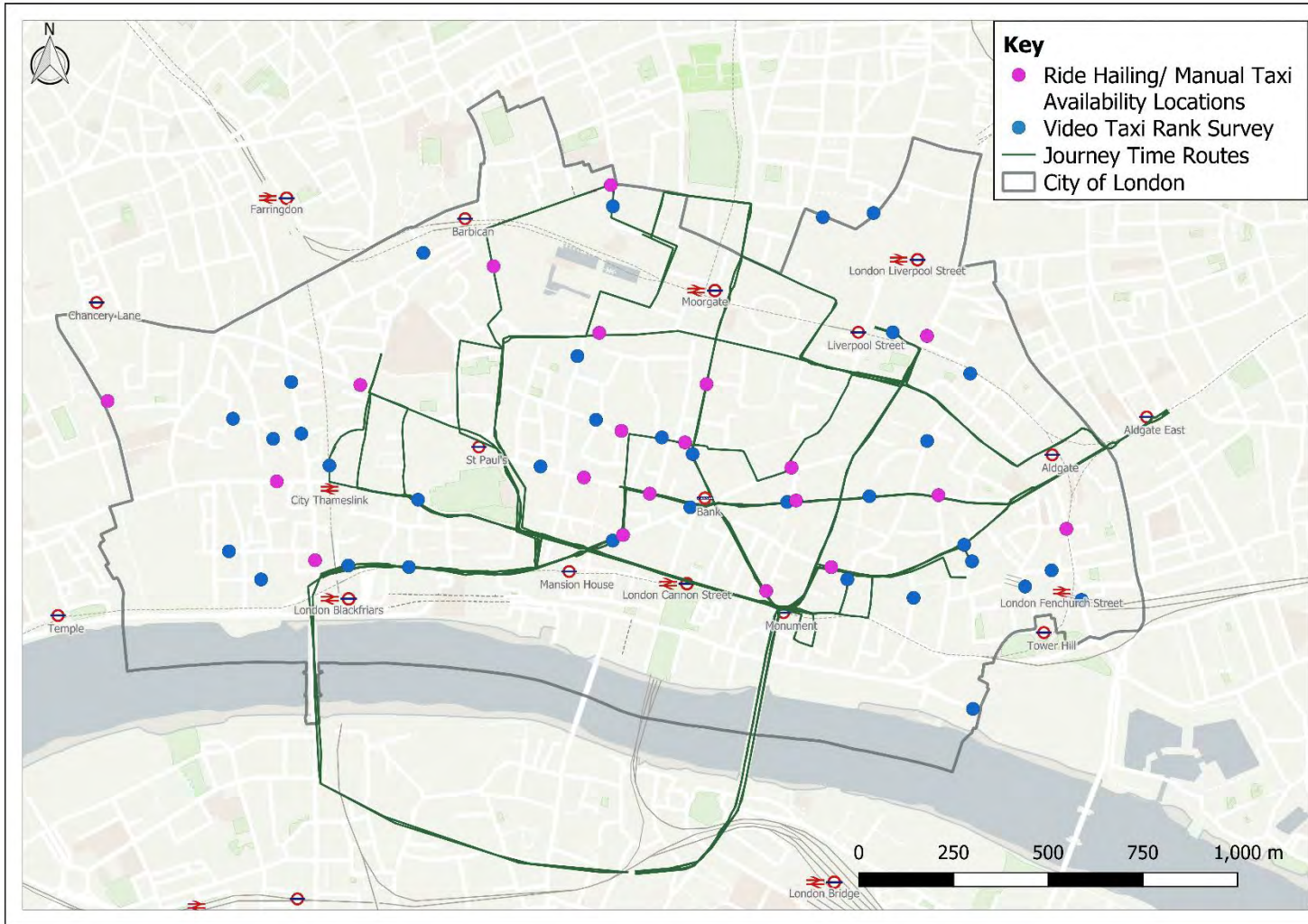
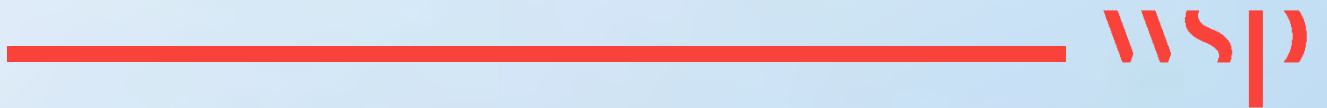


Figure 1-2 - Data collection locations in Westminster for data within the Report



# 2

## METHODOLOGY



## 2 METHODOLOGY

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### 2.1 TAXI RANK SURVEY

34 taxi ranks in the City were identified to be surveyed to see how well they are used (Figure 2-1).

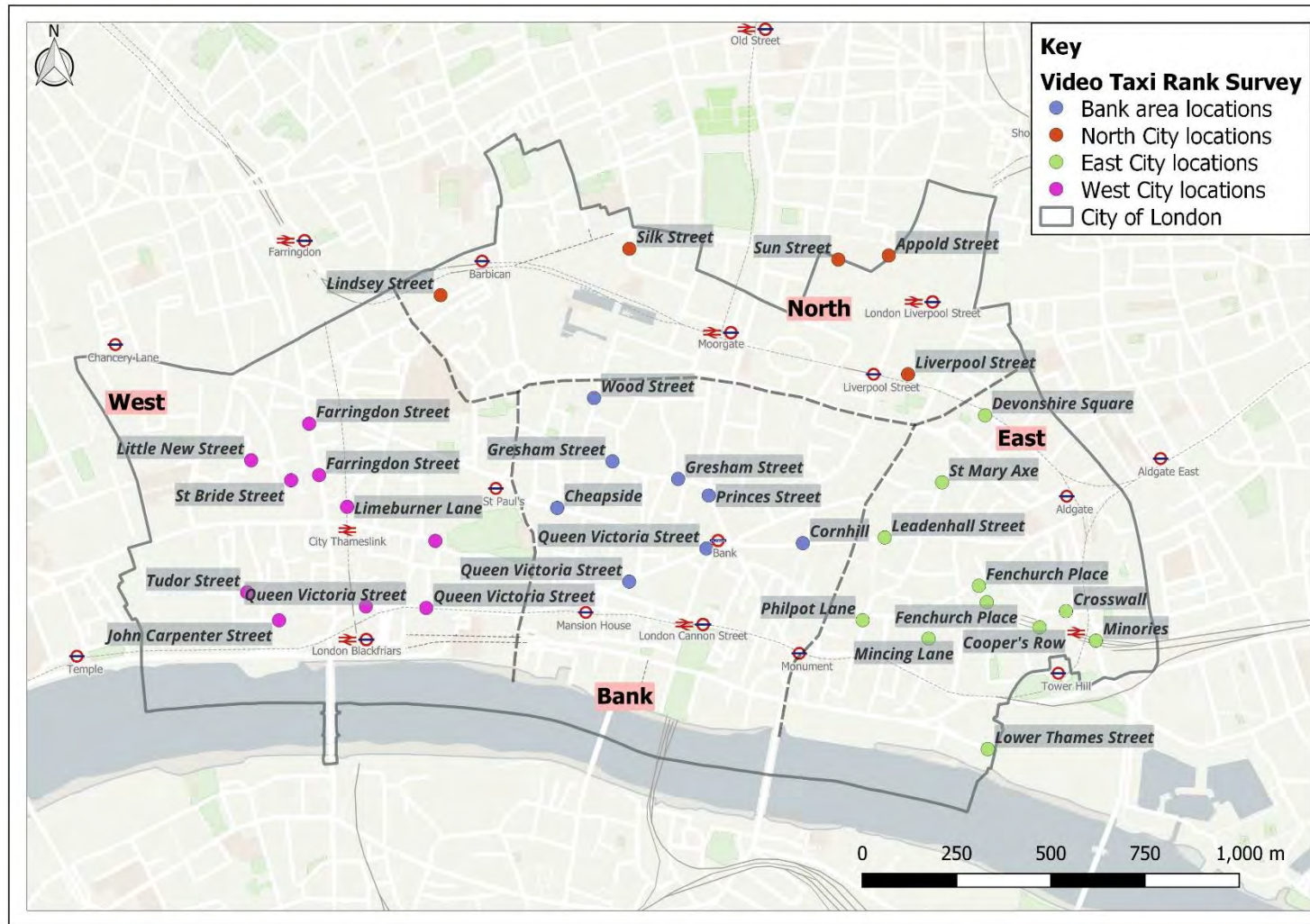
Of the 34 locations, 28 had complete successful surveys, three had no data and three had incomplete data. A 'site by site' summary is available in Appendix A.

The survey recorded:

- The time when each taxi entered the rank;
- Recorded when each taxi left the rank;
- The length of time each taxi spent at the rank; and
- Whether each taxi picked up a passenger before leaving the rank.

Ranks were surveyed Wednesday 11 October 2023. As operating hours were not available for all sites, sites were surveyed for 24hrs regardless. All available operational hours data is summarised in Table 3-1 (page 18), and full details included in Appendix B.

Figure 2-1 - Taxi rank survey locations



## 2.2 RIDE HAILING APPS

Waiting times for a taxi and private hire vehicles (PHVs) via ride hailing apps were captured for each survey site in Figure 2-2. This was captured once every 15 minutes between 7am and 1am for one full day per site occurring on either Tuesday 17<sup>th</sup>, Wednesday 18<sup>th</sup> and Thursday 19<sup>th</sup> of October 2023 using the following apps and services:

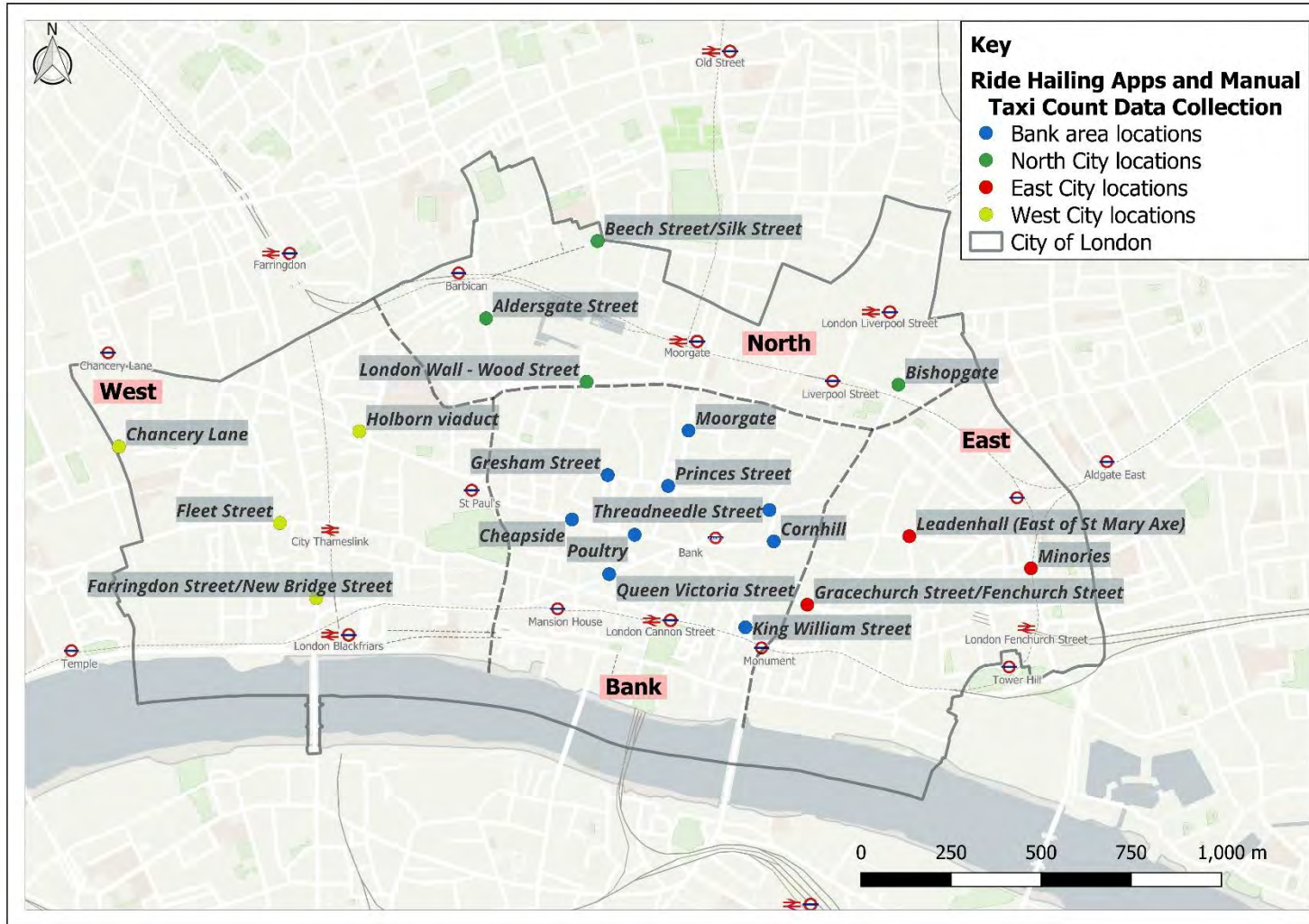
**Table 2-1 - Ride hailing apps used for each data set, taxis, and private hire vehicles**

Taxi	Private Hire Vehicles (PHVs)
Free Now	Free Now
Addison Lee	Uber
Bolt	Bolt

The dates analysis took place at each site are included in Appendix C. These locations correspond to the sites for the manual taxi availability surveys.



Figure 2-2 - Ride hailing data collection locations divided into 'areas'



## 2.3 WESTMINSTER DATA

The evolution of taxi volumes in Westminster before and after the onset of the COVID-19 pandemic was investigated by considering several metrics including the proportion of taxis within the overall traffic, the absolute number of taxis by day, and data segmented by hourly intervals. This data was collected by a third party (Westminster City Council) and analysed by WSP.

The classified traffic count data from Westminster covered Oxford Street pre-COVID-19 on 04/05/2017, Oxford Street post- COVID-19 on 21/09/2022, Regent Street pre- COVID-19 on 26/05/2017 and Regent Street post- COVID-19 on 20/05/2022.

These locations were selected from numerous available location counts plotted on a map, and those with nearby pre and post COVID-19 data selected as pairs.

Oxford Street counts (Figure 2-3):

- 1- A40 Oxford Street / Portman Street / Park Street;
- 2- A40 Oxford Street / Orchard Street;
- 3- Oxford Street / Duke Street; and
- 4- Oxford Street / Holles Street.

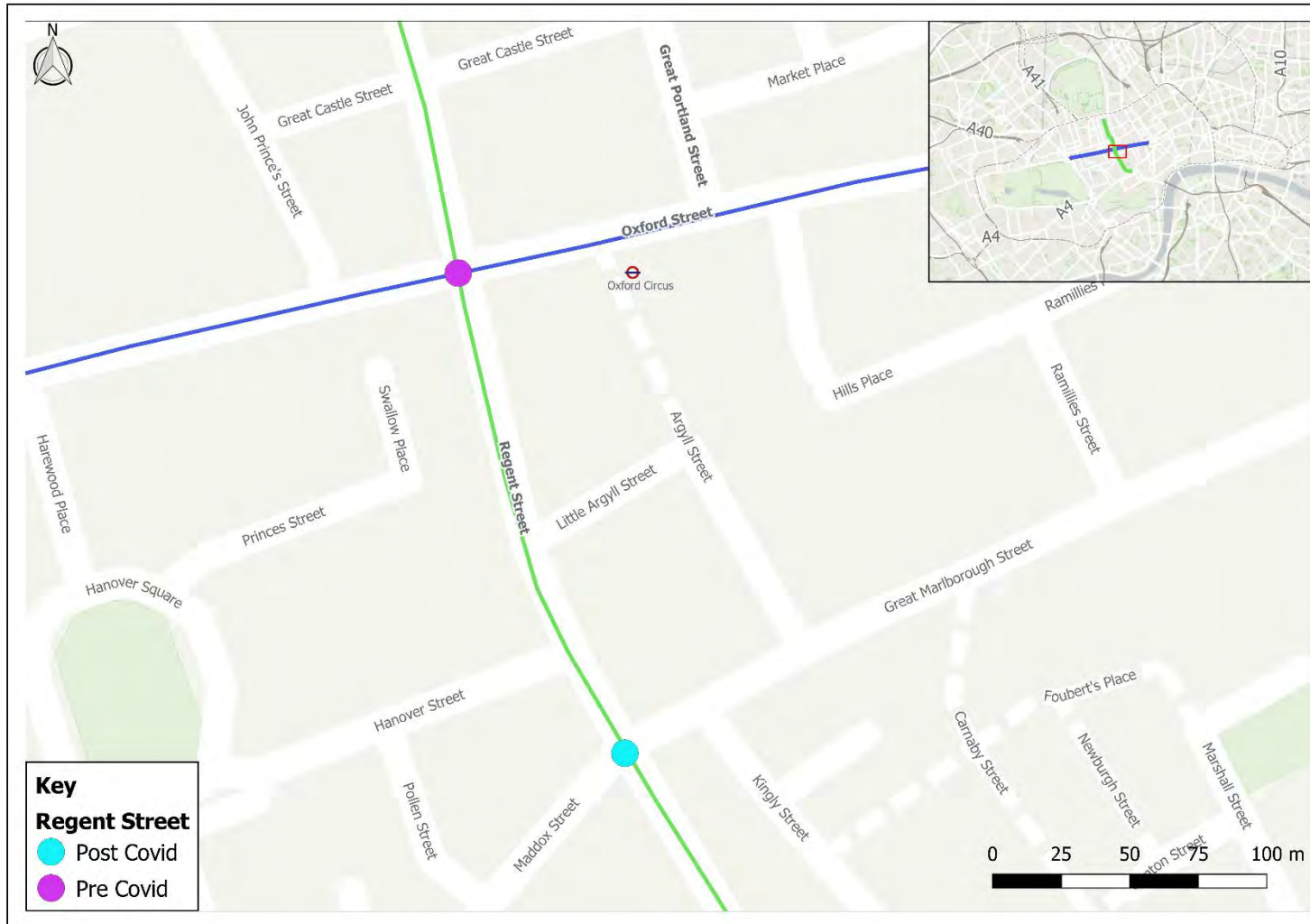
Regent Street counts (Figure 2-4):

- 1- Oxford Street/ Regent Street junction (2017, pre- COVID-19) and Regent Street/ Great Marlborough junction (2022, post- COVID-19).

**Figure 2-3 - Oxford Street classified count locations**



**Figure 2-4 - Regent Street classified count locations**



## 2.4 MANUAL TAXI AVAILABILITY SURVEYS

Manual taxi count surveys were undertaken to record the number of taxis passing the survey location in both directions, whether they had their lights on or off, and how many passengers they were carrying.

Data was collected between 7am and 1am in 15-minute periods on Tuesday 17th, Wednesday 18<sup>th</sup>, Thursday 19th of October, and 2<sup>nd</sup> November 2023.

On the 18<sup>th</sup> October a high security event took place at Mansion House. High security events can sometimes result in temporary road closures for important arrivals, or the increased use of taxis arriving and departing for use of officials. In this instance the site operatives did not notice any prolonged impacts on the movement or availability of taxis.

The dates analysis took place at each site are included in Appendix C. These locations correspond to the sites for the ride hailing app surveys.

## 2.5 JOURNEY TIME DATA

A series of journey time surveys between the four 'origin-destination' pairs listed below were undertaken on Thursday 9th November. Journeys were made between two and six times per pair and via route option in each direction between 4pm and 7pm.

The 'origin-destination' pairs are as follows:

- 1- Southwark Street to Silk Street (via London Bridge);
- 2- Whitechapel High Street to Blackfriars Station;
- 3- Fenchurch Street Station to Giltspur Street; and
- 4- Liverpool Street to Queen Street.

All 'origin-destination' pairs were allocated at least two routes for journey time surveying, with two pairs given a third route via Bishopsgate for additional data collection. These can be seen below:

**Figure 2-5 - Routes driven for each ‘origin-destination’ pairing**

	Take the vehicle through Bank junction	To be taken along Bishopsgate	Take the vehicle along the fastest route that observes all relevant traffic restrictions in place between 7am and 7pm*
1. Southwark Street to Silk Street (via London Bridge)	X	X	X
2. Whitechapel High Street to Blackfriars Station	X		X
3. Fenchurch Street Station to Giltspur Street	X		X
4. Liverpool Street to Queen Street	X	X	X

*\*As well as the pre decided driving routes, the surveyor used the GPS-enabled routing application called Waze. Waze is an app which uses data from other users to understand real life traffic situations and analyses the quickest route. The drivers undertaking the journey time surveys used Waze immediately before the journey started to determine the quickest route to be taken.*

The surveyor also used the TfL Go app immediately before the journey was started and recorded the fastest time and route by public transport that was ‘step-free’ as listed by the app.

At the time of the survey being completed Bank junction had temporary traffic lights operating. These had the potential to add up to 2 minutes onto a journey time run. A breakdown of each run time can be found in Appendix D. Bishopsgate restrictions were also in place and the vehicles were exempted from the penalty charges for the purposes of the trial.

Analysis was undertaken to determine the estimated cost of each journey were the journey to be taken by a black cab, based on Tariff 1 of Transport for London’s (TfL) taxi fares for 2023: <https://tfl.gov.uk/modes/taxis-and-minicabs/taxi-fares/tariffs>

*Tariff 1 is for any hiring during Monday to Friday between 05:00 and 20:00, other than on a public holiday. For the first 190.8 metres or 41.0 seconds (whichever is reached first) there is a minimum charge of £3.80; for each additional 95.4 metres or 20.5 seconds (whichever is reached first), or part thereof, if the distance travelled is less than 9,635.4 metres there is a charge of 20p; once the distance has reached 9,635.4 metres then there is a charge of 20p for each additional 86.9 metres or 18.7 seconds (whichever is reached first), or part thereof.*

# 3

## ANALYSIS



### 3 ANALYSIS

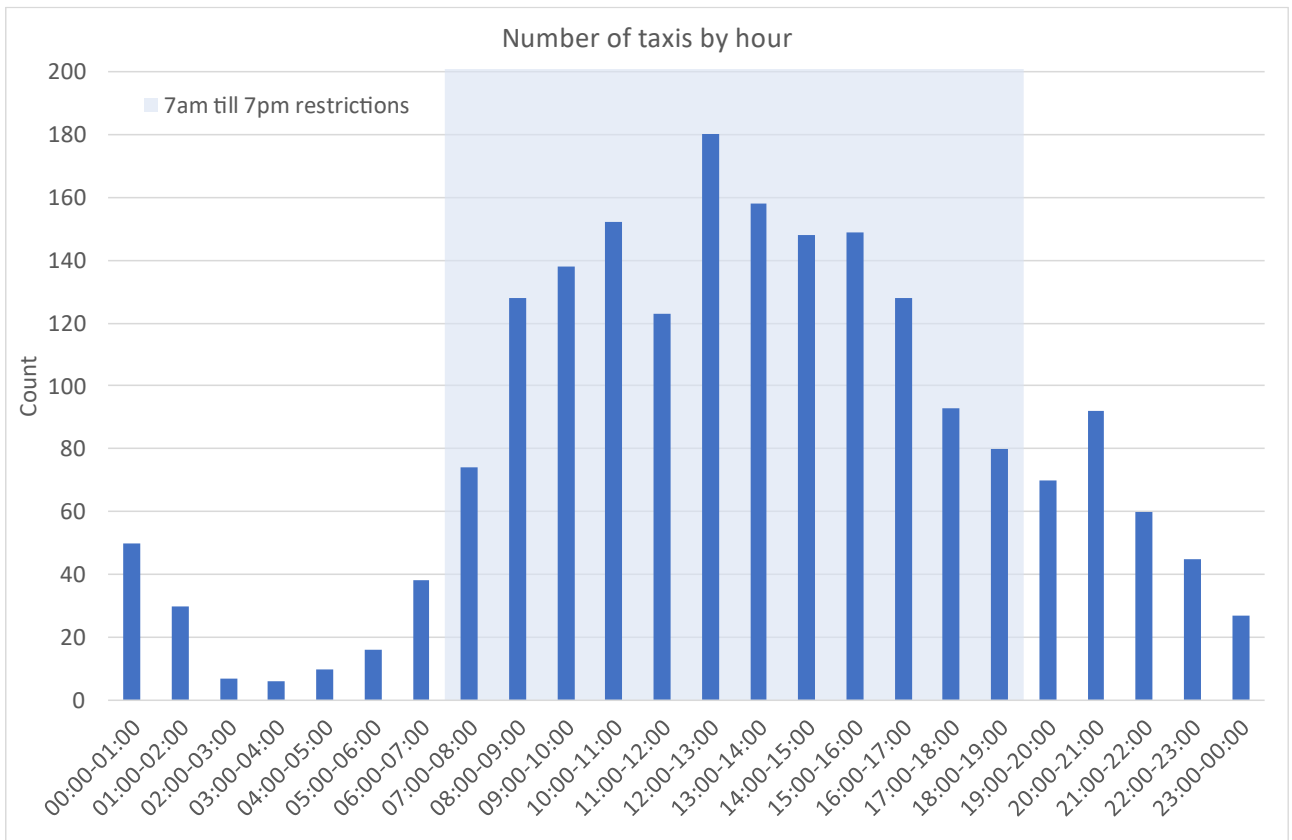
#### 3.1 TAXI RANK SURVEY (CAMERAS)

Data was able to be collected for the majority of the taxi ranks in the City, over a 24-hour period. While we have collected extensive data from numerous taxi ranks, including information about the number of taxis that visit, dwell times, and whether passengers are picked up, it's essential to recognise that there are limitations to being able to draw clear conclusions from the dataset.

Throughout this analysis, data has been compared by site and by 'area' as split out in Figure 2-1 (page 7). There is an even geographical provision of taxi ranks within the City. Liverpool Street has been extracted as a separate site and not included in the North area average due to its high numbers not being comparable to other locations. In total, over a 24-hour period, ranks in the Bank area (seven ranks) had 135 recorded visits by taxis, East (11 ranks) had 664, Liverpool Street (one rank) 879, North (three ranks) 74, and West (eight ranks) 250.

Over the survey period 2002 taxis were recorded across 30 ranks. The number of taxis arriving at any rank peaked at 12:00 to 13:00 and was lowest between 02:00 and 04:00.

**Figure 3-1 - Number of taxis arriving at all locations by hour**





Not all taxi ranks reviewed in the city are operation 24 hours a day. The table below shows the hours for which the taxi ranks are non-operational coloured in 'grey'. Taxi ranks are normally appointed by the City of London Police and operational times are correct as of October 2022\*<sup>1</sup>. It also shows the number of taxis which visited each rank, per hour of operation.

Full taxi rank locations can be found in Appendix A and details on the hours of operation in Appendix B. Figure 3-2 (page 20) shows that taxi ranks in all areas of the City differ in their usage. It does not appear that one geographical area is more popular than others when comparing the number of taxis visiting the ranks. What appears more important in terms of usage by taxis is the proximity of the rank to key attractors such as transport stations, tourist destinations and hotels.

As can be seen in the table, despite the operational time, it appears some ranks are being used outside of reported hours such as Mincing Lane, Princes Street and Limeburner Lane.

Despite some taxi ranks having very low counts such as both locations on Farringdon Street, this does not reflect the number of taxis in the surrounding area. As shown in Table 3-3 (page 50), Fleet Street and Holborn Viaduct, locations nearby, had some of the highest counts of available taxis across the city. This shows that although some ranks are not highly used, taxis are still available to hail on the road or via apps.

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<sup>1</sup> <https://content.tfl.gov.uk/tfl-taxi-ranks-booklet.pdf>, Appendix B.



**Table 3-1 - Heat map showing number of taxis visiting each rank by location for 24 hours**

	Site No.	0-1am	1-2am	2-3am	3-4am	4-5am	5-6am	6-7am	7-8am	8-9am	9-10am	10-11am	11-12am	12-1pm	1-2pm	2-3pm	3-4pm	4-5pm	5-6pm	6-7pm	7-8pm	8-9pm	9-10pm	10-11pm	11-12am	Total
Lindsey Street	1	2	0	0	0	0	0	0	2	0	0	3	1	2	2	2	1	2	4	1	0	1	2	0	0	<b>25</b>
Silk Street	2	1	0	0	0	0	0	0	2	2	4	1	2	1	1	2	0	1	3	7	1	1	2	1	0	<b>32</b>
Appold S	4	0	0	0	0	0	0	0	0	3	0	0	1	4	0	0	2	2	2	0	2	1	0	0	0	<b>17</b>
Liverpool St	5	33	22	3	2	4	2	11	29	57	55	66	54	70	65	55	59	48	34	31	45	54	34	29	17	<b>879</b>
Devonshire Sq	6	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	<b>4</b>
St Mary Axe	7	4	1	2	1	1	1	3	1	0	0	4	4	4	2	1	4	1	0	2	0	2	1	1	1	<b>41</b>
Leadenhall St	8	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>1</b>
Philpot Lane	9	1	1	0	0	0	0	0	4	7	8	4	5	4	4	1	0	3	3	2	1	2	1	0	0	<b>51</b>
Mincing Lane	10	0	1	0	0	0	0	0	0	2	3	0	0	1	0	1	0	1	0	2	0	0	0	0	0	<b>11</b>
Worth Fenchurch PI	11	0	0	0	0	0	1	1	0	3	6	2	5	4	2	2	3	3	3	2	0	1	1	0	0	<b>39</b>
Fenchurch PI	12	2	0	0	0	0	6	9	14	31	15	12	14	15	15	9	9	13	7	8	0	7	4	4	1	<b>195</b>
Coopers Row	13	0	1	0	2	3	3	6	9	7	14	5	3	6	6	11	7	5	1	4	6	4	5	3	1	<b>112</b>
Minories	14	0	0	0	0	0	0	0	0	0	2	0	1	0	2	0	0	0	3	0	0	0	0	0	0	<b>8</b>
Lower Thames St	15	0	0	0	0	0	0	0	1	4	7	19	9	17	21	24	28	20	17	6	1	0	0	0	1	<b>175</b>
Cornhill	16	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>1</b>
Queen Victoria St	18	0	0	0	0	0	0	2	0	1	0	0	2	1	2	1	1	0	0	0	2	0	1	0	1	<b>14</b>
Princes St	19	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	2	0	1	0	0	1	<b>7</b>
Gresham St	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	0	0	0	<b>5</b>
Gresham St	21	1	1	0	0	0	0	0	3	1	3	4	2	4	1	2	1	0	1	0	1	3	2	4	2	<b>36</b>
Cheapside	22	0	0	0	0	0	2	1	1	2	0	2	6	10	9	7	8	9	4	2	1	1	0	0	0	<b>65</b>
St.Paul's C Y	23	6	0	1	1	0	0	1	2	2	8	10	6	15	10	13	18	14	3	3	1	6	4	2	1	<b>127</b>
Queen Victoria St	24	0	0	0	0	0	1	2	2	0	1	4	1	4	4	1	2	0	2	0	4	2	2	0	1	<b>33</b>

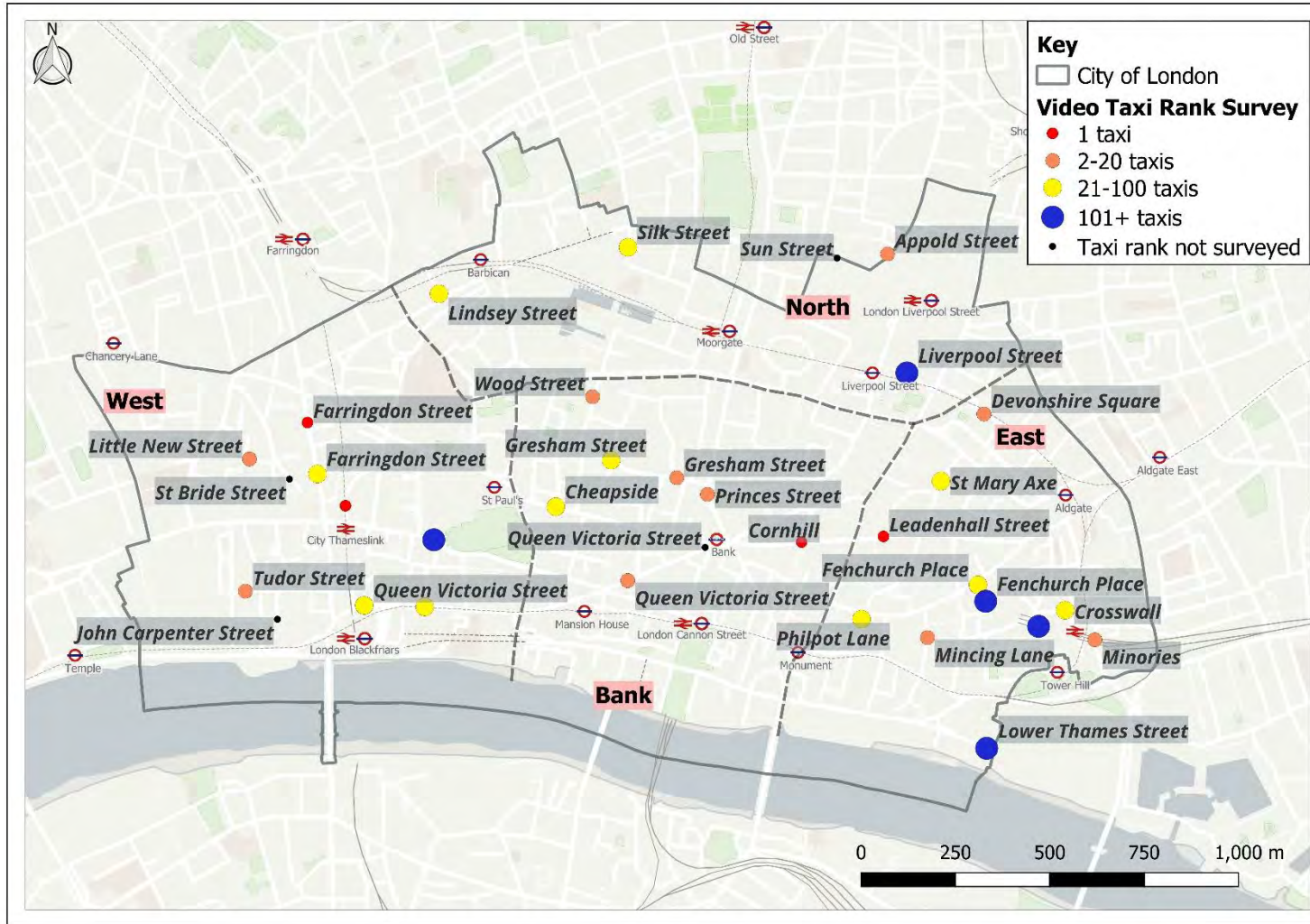


	Site No.	0-1am	1-2am	2-3am	3-4am	4-5am	5-6am	6-7am	7-8am	8-9am	9-10am	10-11am	11-12am	12-1pm	1-2pm	2-3pm	3-4pm	4-5pm	5-6pm	6-7pm	7-8pm	8-9pm	9-10pm	10-11pm	11-12am	Total
Queen Victoria St	25	0	1	1	0	2	0	1	1	3	0	3	1	1	3	6	2	2	2	3	0	3	1	1	0	37
Tudor St	27	0	0	0	0	0	0	0	0	0	2	1	0	3	1	2	0	1	0	1	0	0	0	0	0	11
Limeburner Ln	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Farringdon St	29	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Little New St	31	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	2	0	1	3	2	0	0	0	0	11
Farringdon St	32	0	0	0	0	0	0	1	2	2	4	5	1	4	3	3	2	1	0	0	0	1	0	0	0	29
Wood St	33	0	0	0	0	0	0	0	1	0	0	3	0	0	1	1	0	0	1	0	0	0	0	0	0	7
Crosswall	34	0	0	0	0	0	0	0	0	1	5	3	5	5	2	3	0	0	1	0	1	1	0	0	0	27

### Key

Colour	Count of taxis
Grey	Non-operational hours
White	0
Light blue	1-5
Medium blue	6-11
Dark blue	12+

Figure 3-2 - Map showing number of taxi recordings by site

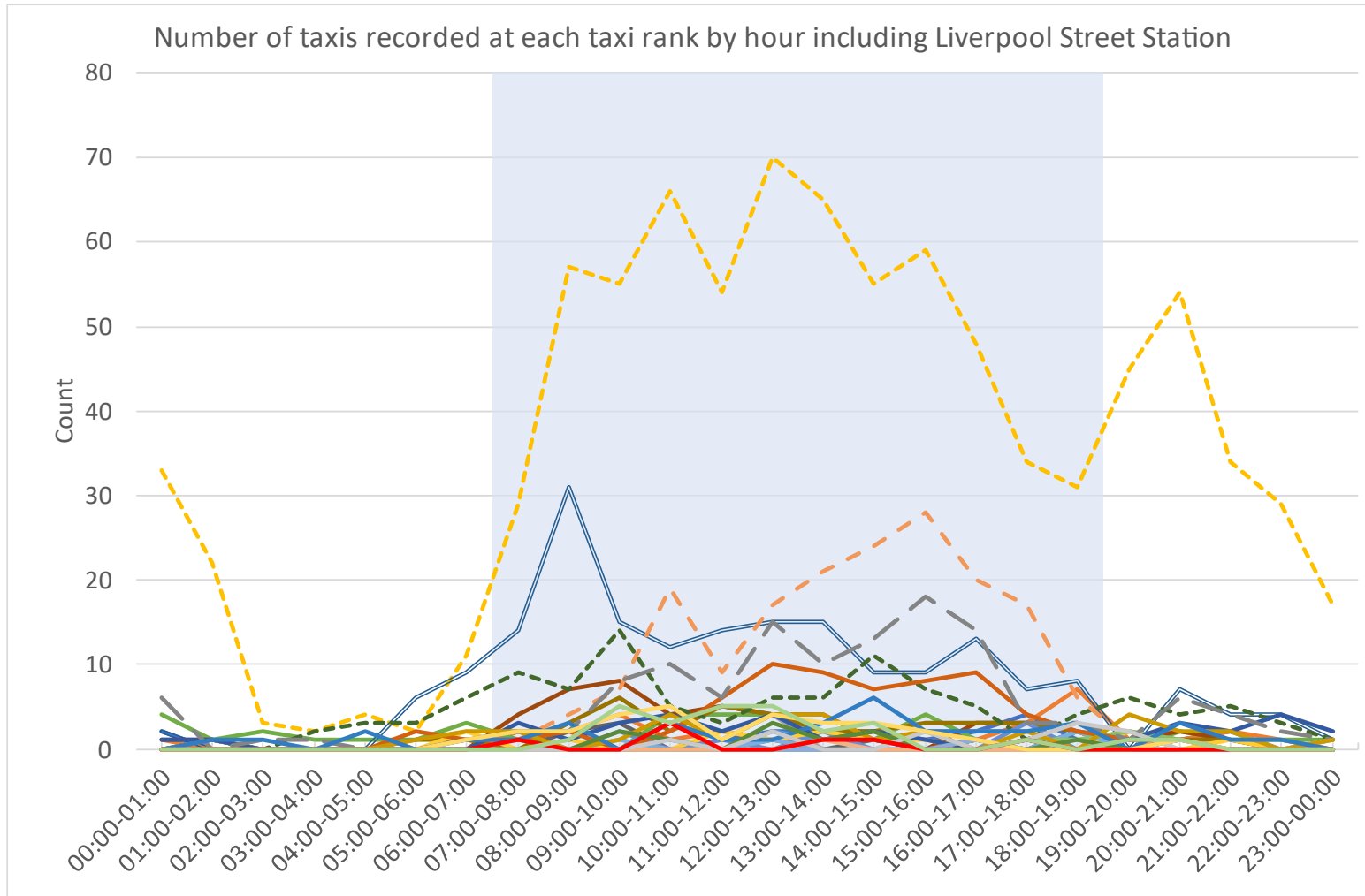


Liverpool Street station has the highest recorded number of taxis across the day (Figure 3-3). Taxis exceeded 30 an hour between 8am and 10pm, only falling below 20 taxis an hour between 2am and 7am, and 11pm and midnight. This rank operates differently to the other ranks in the City as it operates near the station exit as a continuous feeder rank.

The taxi ranks with the next highest level of visitation/ utilisation includes Fenchurch Place/St Katherines Row which is adjacent to Fenchurch Street station. Fenchurch Place shows a significantly higher turnover of taxis in the morning peak which is expected at a major train station The rank on Lower Thames St is adjacent to the Tower of London. It is expected that these three ranks would have a high level of taxi usage.

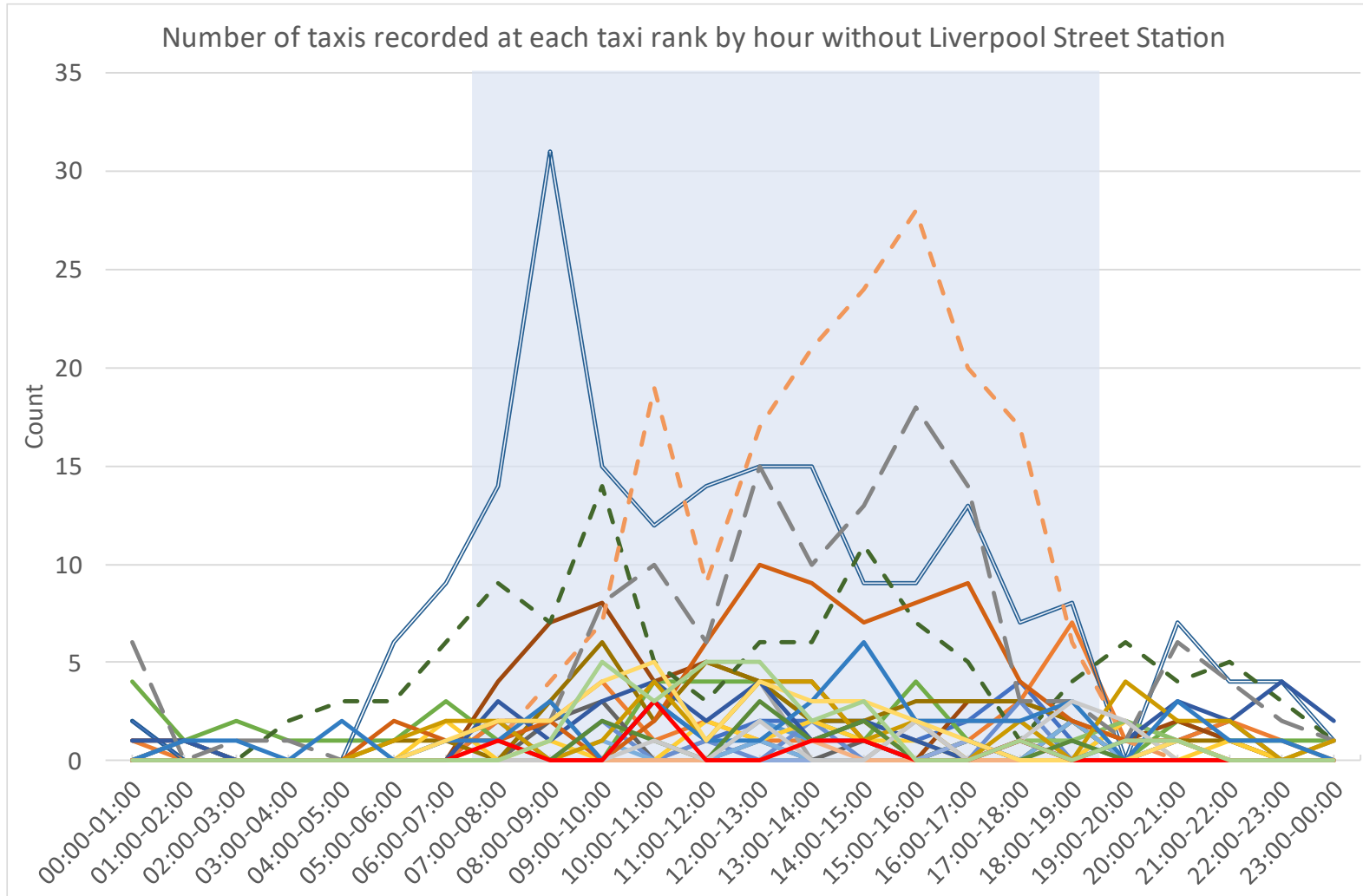
Figure 3-4 (page 24) shows the Fenchurch Place/ St Katherines Row, Lower Thames Street and Coopers Row also had some of the most visited taxi ranks between 7am and 7pm.

**Figure 3-3 - Number of taxis recorded at each taxi rank by hour including Liverpool Street Station**



7am till 7pm restrictions	Lindsey Street (east of Smithfield Market)
Silk Street (adj Linklaters)	Appold Street
Liverpool Street (East)	Devonshire Square
St Mary Axe	Leadenhall Street
Philpot Lane	Mincing Lane
Fenchurch Place /Fenchurch St	Fenchurch Place /St Katherines Row
Coopers Row	Minories
Lower Thames Street	Cornhill
Queen Victoria Street (Bloomberg)	Princes Street
Gresham Street (west junc with Old Jewry)	Gresham Street (west Milk Street)
Cheapside ( One New Change)	St. Paul's Churchyard
Queen Victoria Street (Church of Scientology)	Queen Victoria Street (Blackfriars Station)
Tudor Street	Limeburner Lane
Farringdon Street (opp Goldman Sachs)	Little New Street
Farringdon Street (Old Fleet Lane)	Wood Street
Crosswall	

**Figure 3-4 - Number of taxis recorded at each taxi rank by hour without Liverpool Street Station**



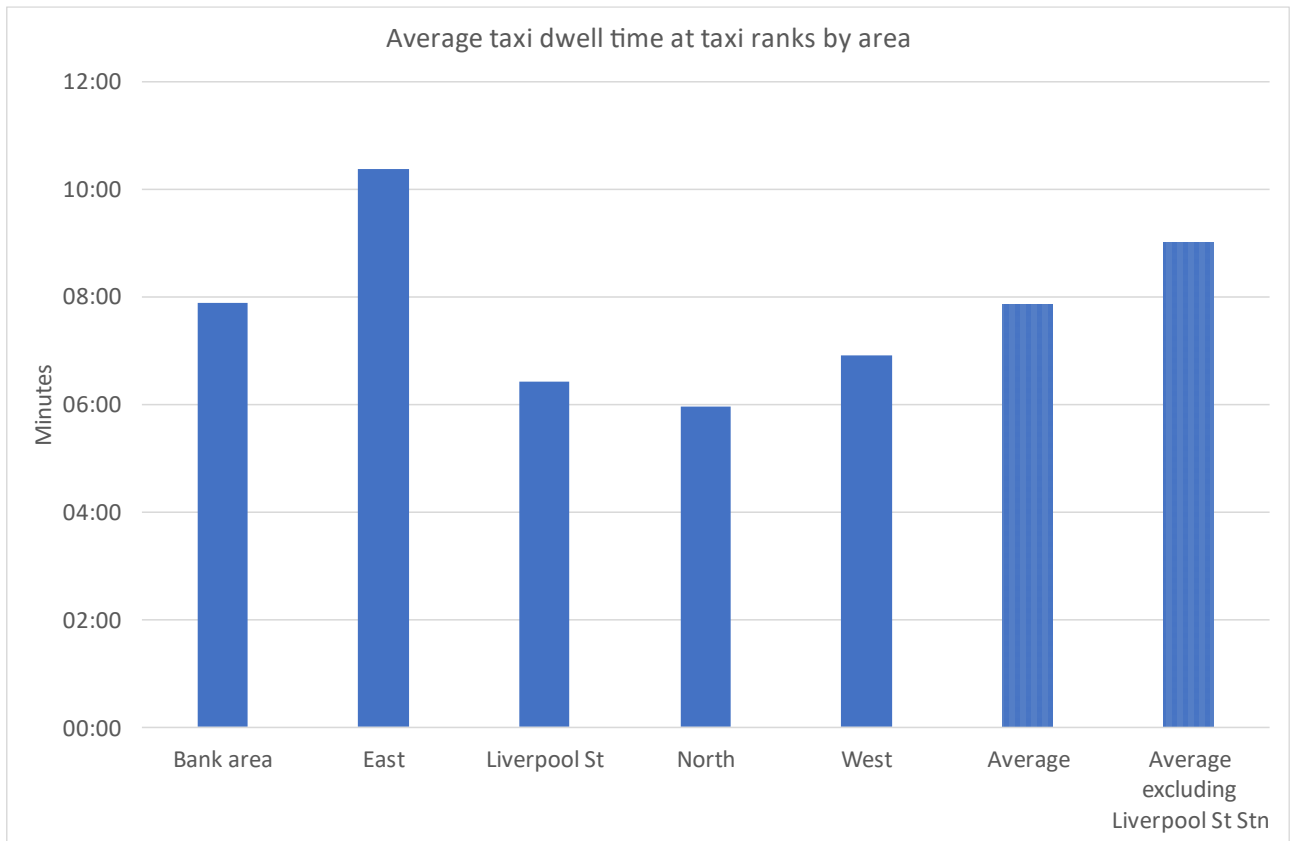


7am till 7pm restrictions	Lindsey Street (east of Smithfield Market)
Silk Street (adj Linklaters)	Appold Street
Devonshire Square	St Mary Axe
Leadenhall Street	Philpot Lane
Mincing Lane	Fenchurch Place /Fenchurch St
Fenchurch Place /St Katherines Row	Coopers Row
Minorities	Lower Thames Street
Cornhill	Queen Victoria Street (Bloomberg)
Princes Street	Gresham Street (west junc with Old Jewry)
Gresham Street (west Milk Street)	Cheapside ( One New Change)
St. Paul's Churchyard	Queen Victoria Street (Church of Scientology)
Queen Victoria Street (Blackfriars Station)	Tudor Street
Limeburner Lane	Farringdon Street (opp Goldman Sachs)
Little New Street	Farringdon Street (Old Fleet Lane)
Wood Street	Crosswall

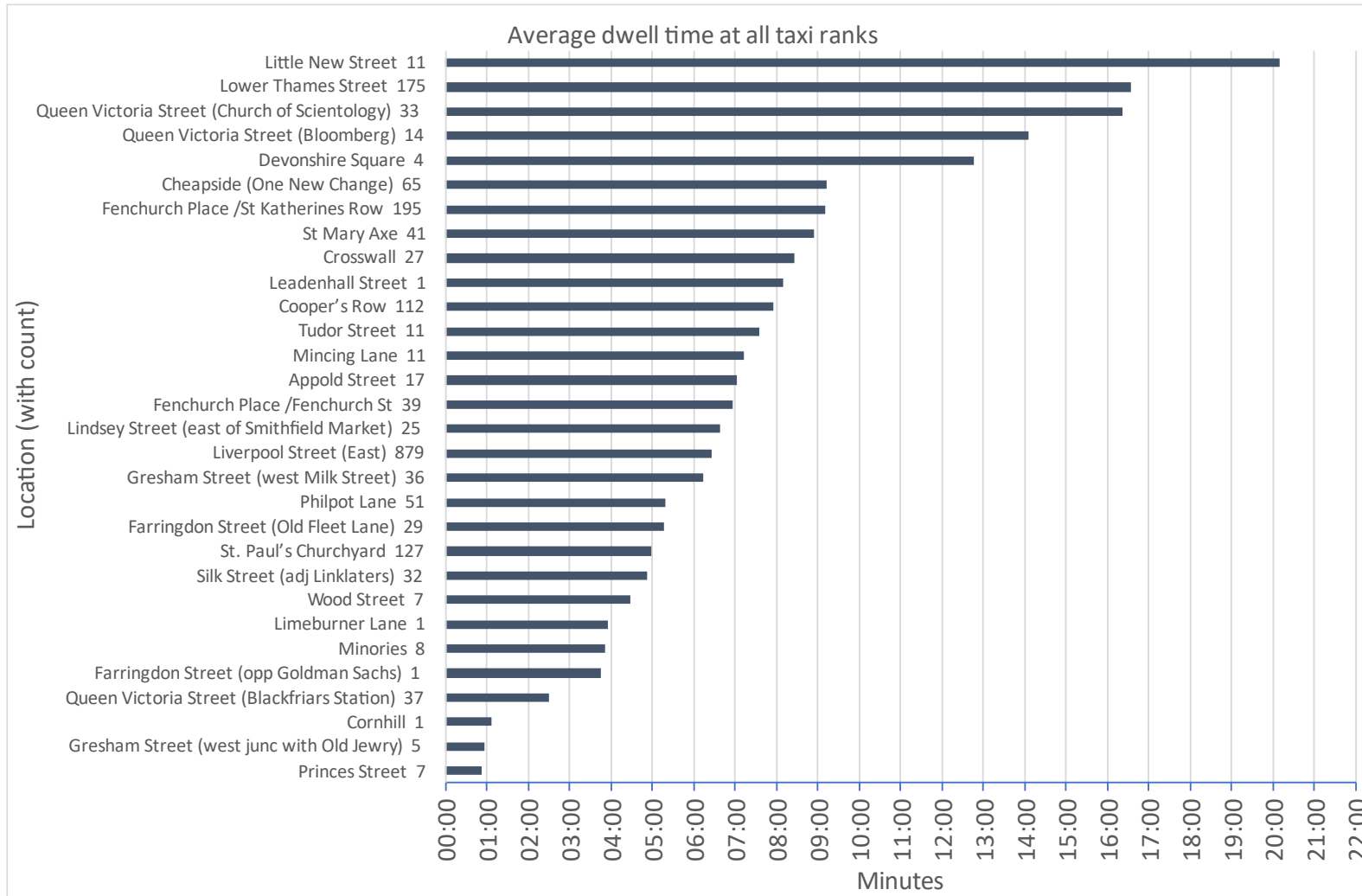
Average dwell time across the sites ranges from under one minute at Princes Street and Gresham Street (west of junction with Old Jewry) to over 20 minutes at Little New Street (Figure 3-6).

Although there is a variation between dwell time at individual sites, the average for different areas in the City of London are similar. The north of the City has the lowest average dwell time of 6 minutes and 18 seconds, and the East had the highest average dwell time of 10 minutes and 21 seconds (Figure 3-5). Bank area taxi ranks had an average dwell time of 7 minutes and 53 seconds, 1 minute and 7 second less than the average of all sites (after excluding Liverpool Street from the dataset). Despite the longest dwell at the East ranks, there were very high levels of activity at here suggesting that longer dwell times do not appear to discourage/strongly impact rank use.

**Figure 3-5 - Average taxi dwell time at taxi ranks by area**



**Figure 3-6 - Average dwell time for each site, including number of recordings**

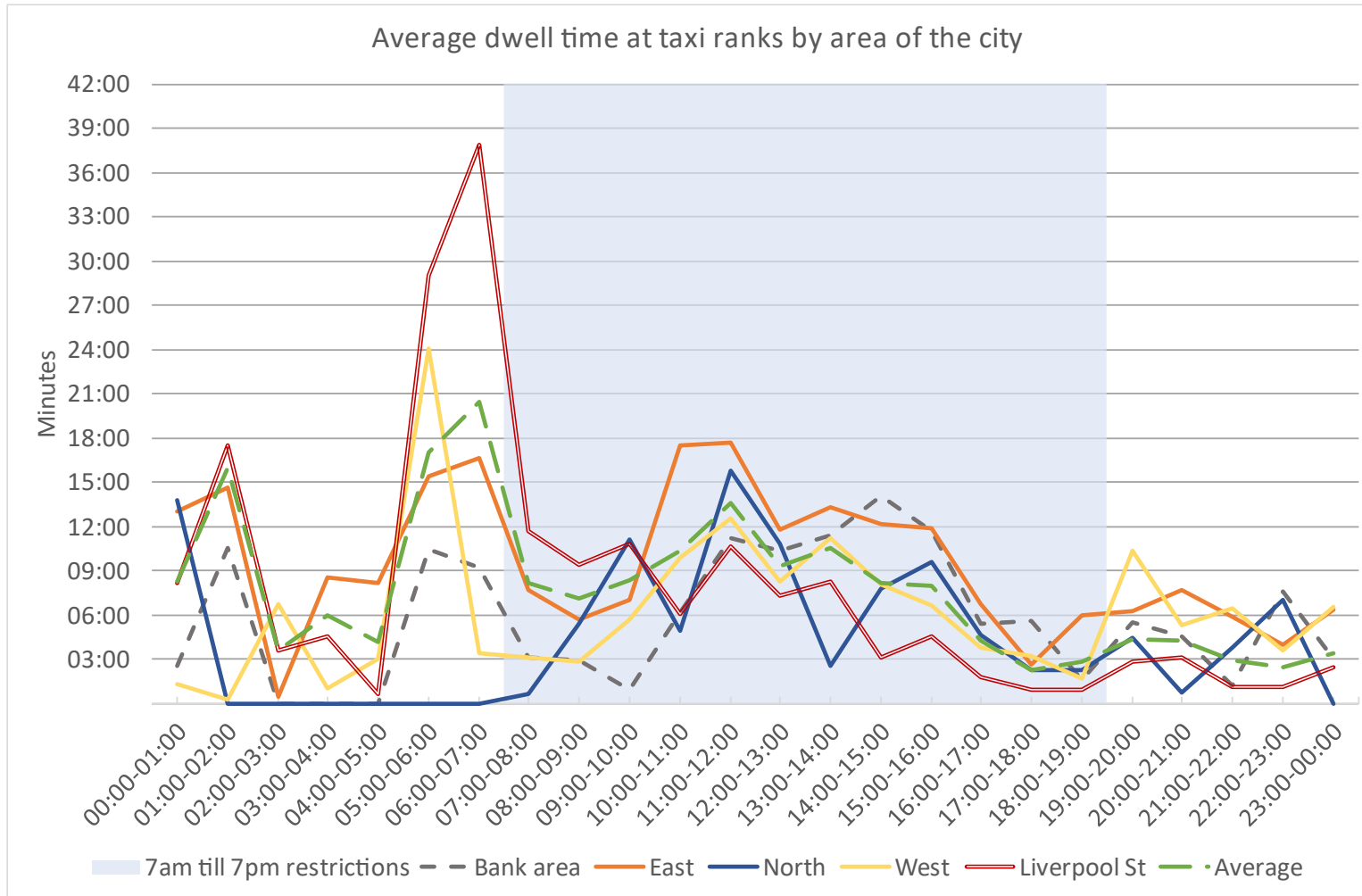




Average dwell time at taxi ranks fluctuates throughout the day, with a longer dwell time seen around 01:00 to 02:00, 05:00 to 07:00, and 11:00 to 12:00 (Figure 3-7).

Dwell times may be higher at certain times of the day for a variety of reasons. Between 05:00 and 07:00 we anticipate dwell times to be higher as taxis may be waiting for people to get into the city, and 11:00 to 12:00 may be the result of drivers taking breaks or getting lunch.

**Figure 3-7 - Average dwell time at taxi ranks by area of the city**

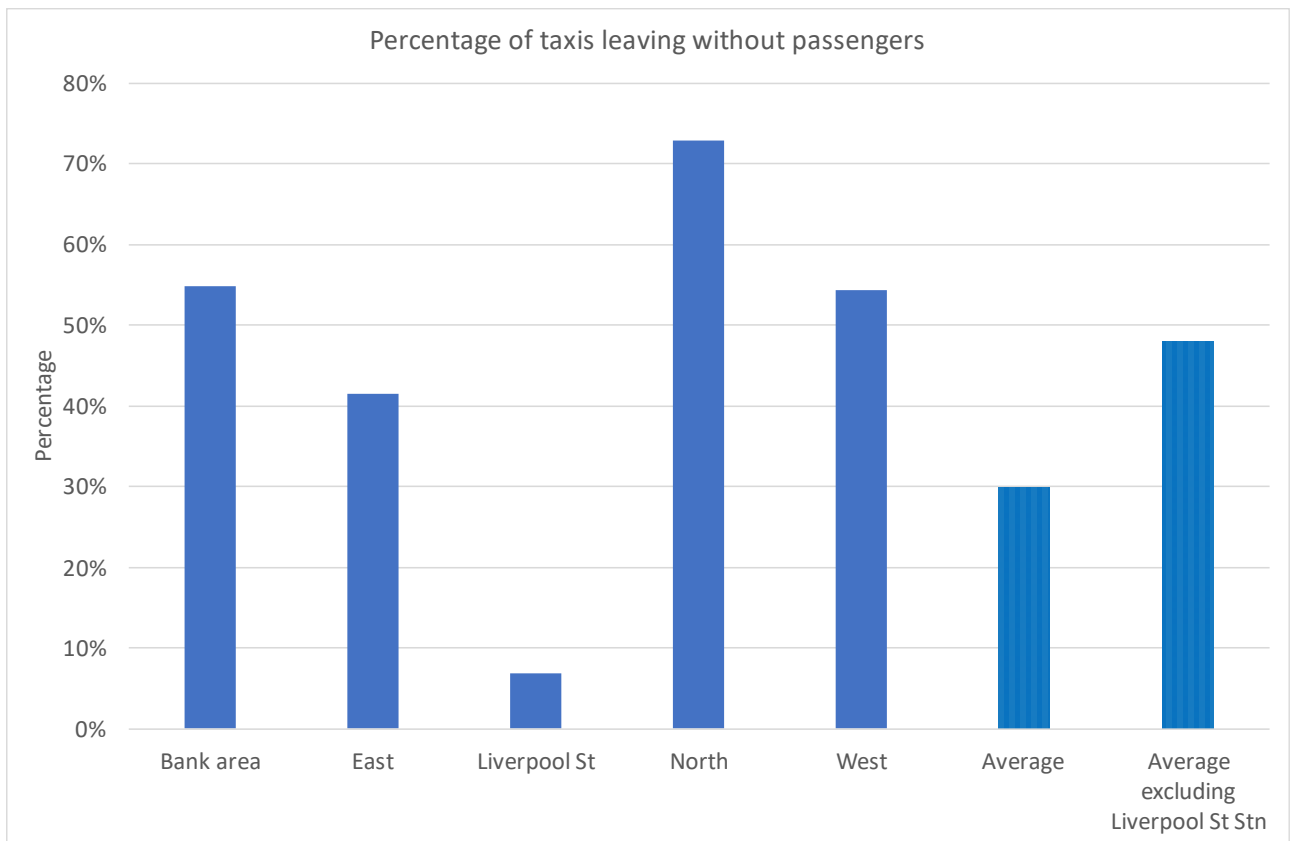


\*Liverpool Street has been removed from the North City average.

Analysis has taken place on taxis that did not pick up passengers before leaving the rank. Across all sites, 70% (1402) of the taxis picked up passengers at the taxi ranks, compared to 30% (600) taxis leaving without a passenger. Liverpool Street, the taxi rank with the most counts throughout the day, had less than 10% of taxis leaving without a passenger. This reflects the number of people passing through the station every day.

Bank area had only 7% more taxis leaving without a passenger than what was seen on average though out the City (after excluding Liverpool Street from the dataset).

**Figure 3-8 - Percentage of taxis leaving without passengers**



In conclusion, many ranks in the City are lightly used and there is variance in all areas of the City, however this does not reflect the overall availability of taxis in the areas. Despite some ranks recording low numbers of taxis using them, manual counts show high availability of taxis in the areas.

Moving forward, the City of London should consider taking proactive measures to enhance the efficiency of taxi services. One potential avenue for improvement involves a reassessment of the existing locations of taxi ranks. This process would involve an examination of each rank's usage patterns, taking into account factors such as peak hours, traffic density, and popular destinations.

Some ranks may serve as more than just pick-up and drop-off points; they may currently be serving as rest stops for taxi drivers. The review should involve determining whether certain



taxi ranks are no longer needed. What was once a strategic location for a taxi rank may no longer be as relevant.

## 3.2 RIDE HAILING APPS

Ride hailing apps were used to estimate the wait time for taxis and PHVs across the city. However, it's crucial to note that these estimations were derived without completing actual bookings. Instead, they were based on the wait time displayed on the app when commencing the booking process. It is possible that these initial estimations may not accurately reflect the actual hire/wait times experienced by users. This discrepancy arises from the fact that drivers need to accept the booking request, which introduces an additional variable in the process. There's also the possibility of cancellations by the driver after accepting the booking, further complicating the accuracy of the estimated wait times.

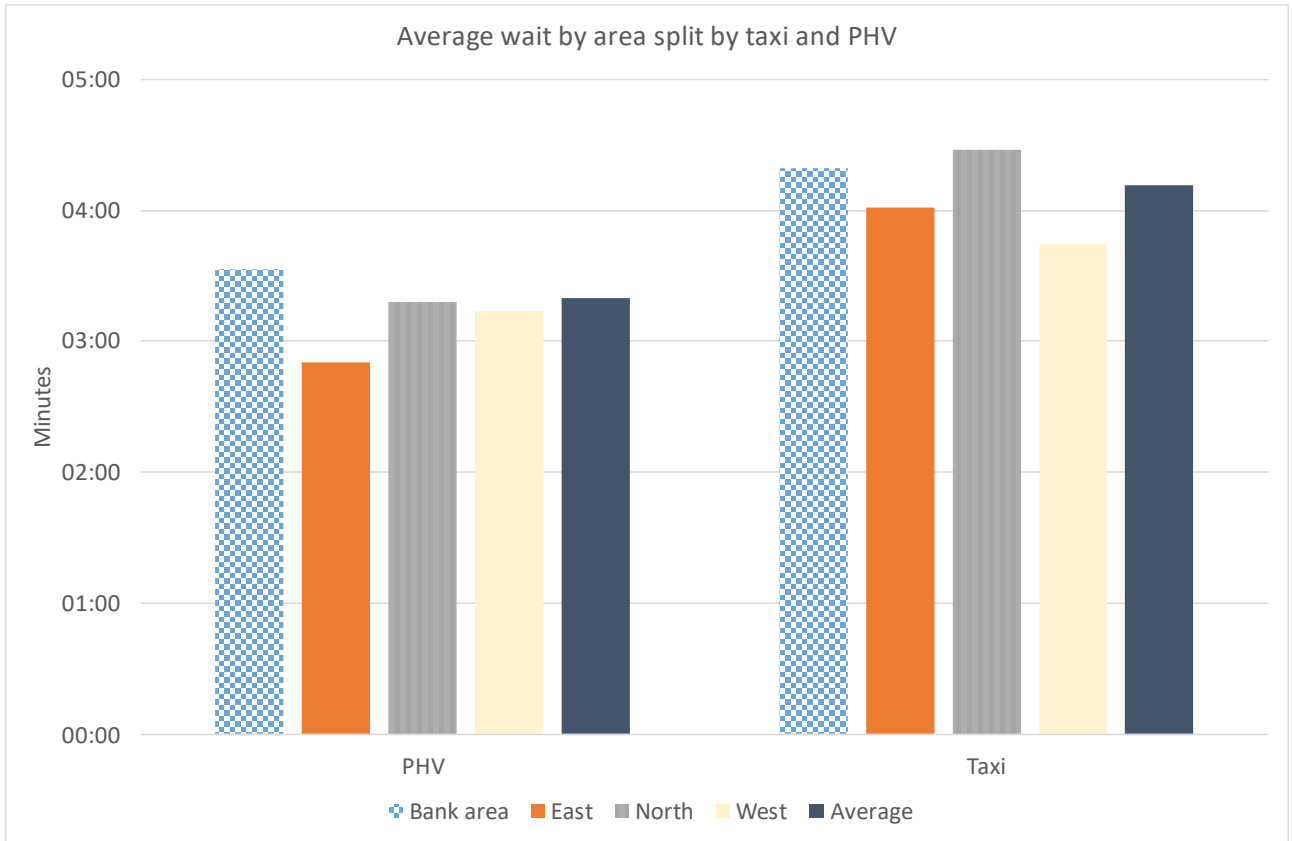
Throughout this analysis, data has been compared by site and by 'area' as defined in Figure 2-1 (page 7). Analysis has been divided between taxis and private hire vehicles available to hail via the different 'apps'. Due to data quality issues, some recordings were excluded from this dataset. A full explanation of the reasons for exclusions and impacts on processing and analysis can be found in the explanatory note in Appendix E.

Waiting times for ride-hailing apps exhibited minimal variation across the majority of locations, as the average wait times at most sites were within a one-minute range of the overall average wait time. For PHVs the East had the shortest wait time at 2 minutes and 50 seconds and Bank area had the longest wait time of 3 minutes and 33 seconds. This is only 13 seconds above the average for City of 3 minutes and 20 seconds (Figure 3-9). Taxis across the City had a longer wait time on average, with the West showing the shortest wait time of 3 minutes and 45 seconds and the North the longest wait time of 4 minutes and 28 seconds. The average wait time at Bank was 4 minutes and 20 seconds just longer than the average for City at 4 minutes and 11 seconds.

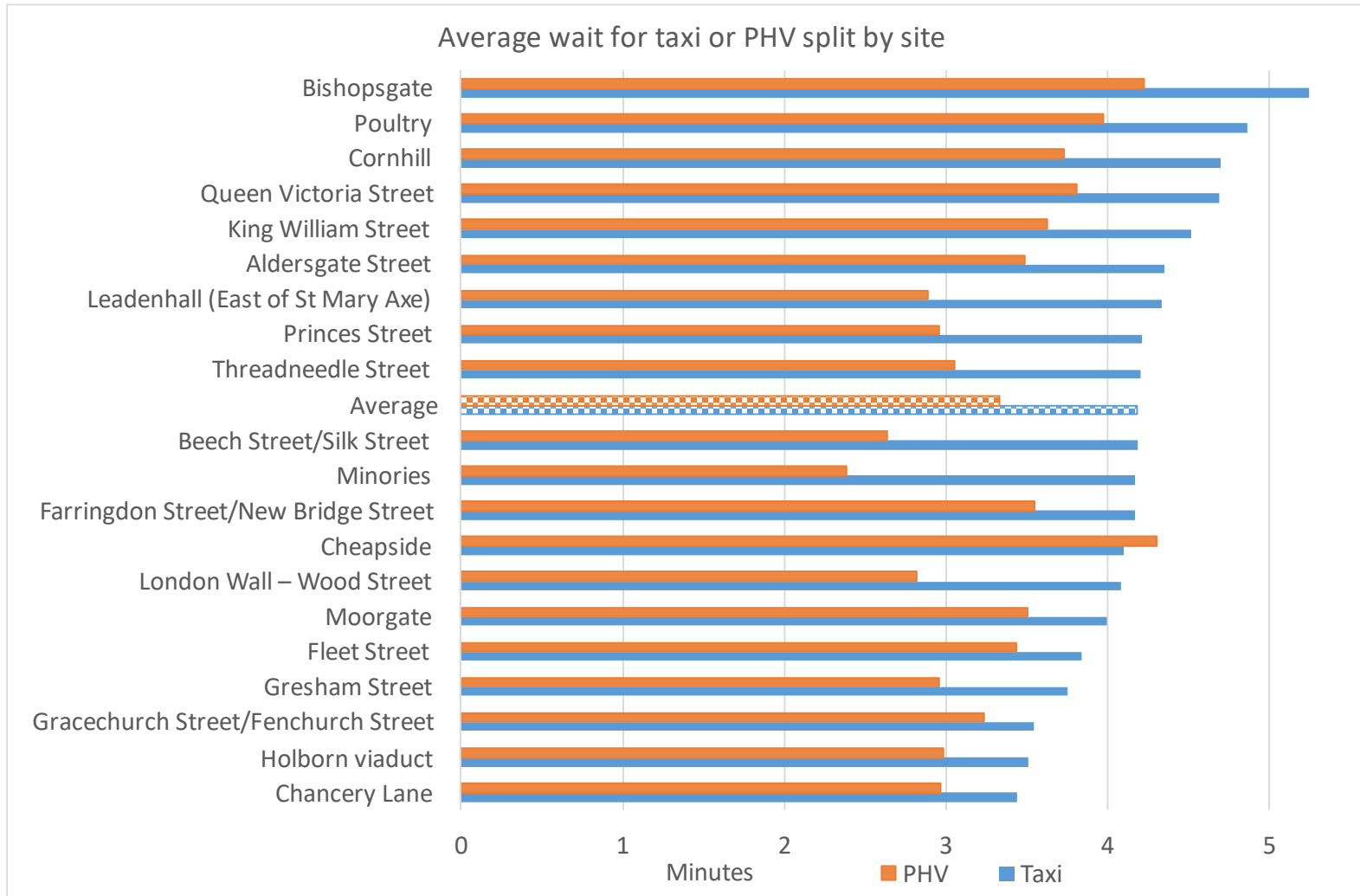
The breakdown by site in Figure 3-10 (page 34) shows that only Farringdon Street/New Bridge Street had a longer PHV wait time than Taxis. Wait times were longest on Bishopsgate and lowest on Chancery Lane.



**Figure 3-9 - Average wait time for taxis/black cabs across the whole survey period**



**Figure 3-10 - Average wait for taxi or PHV split by site**

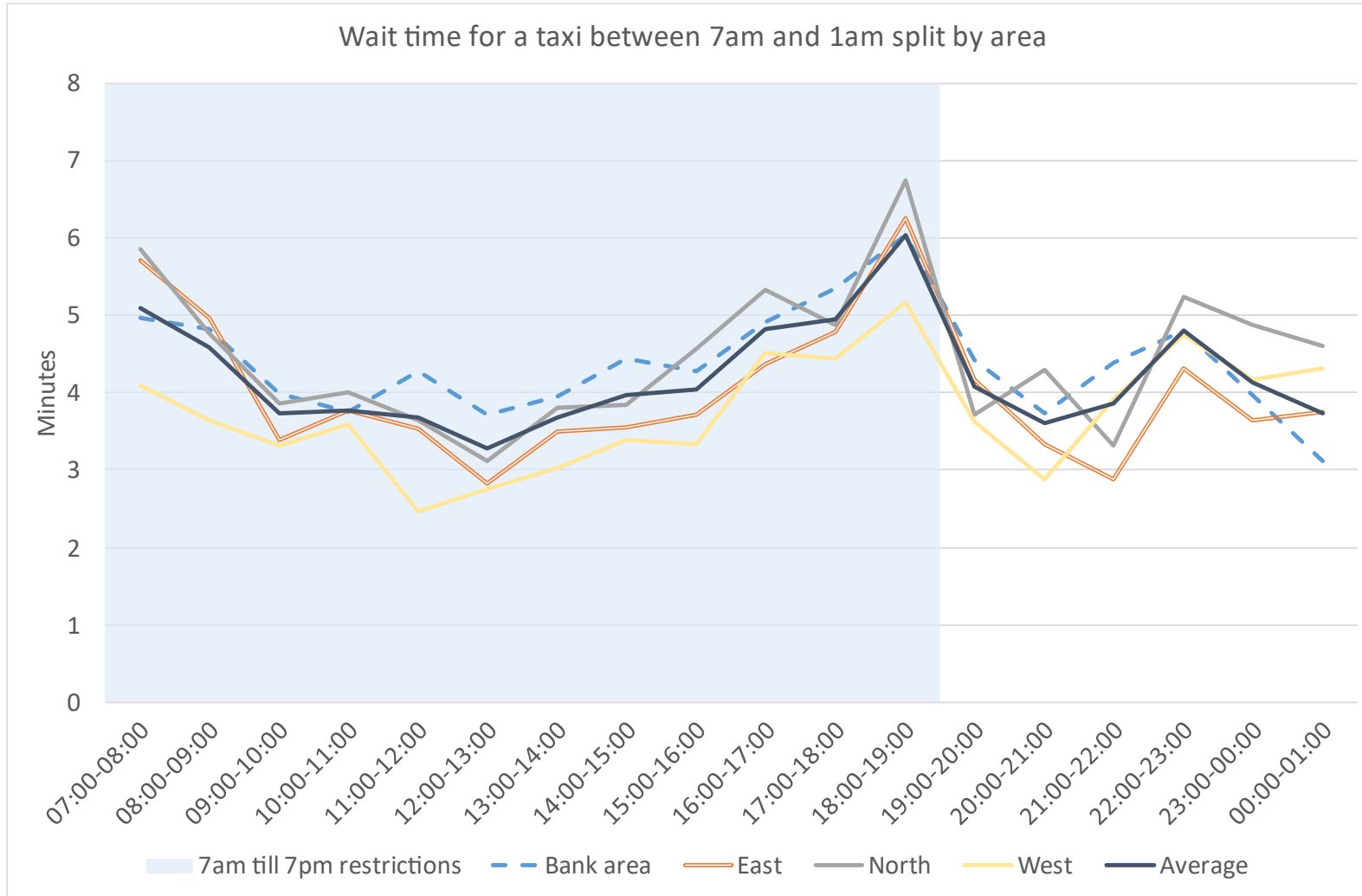




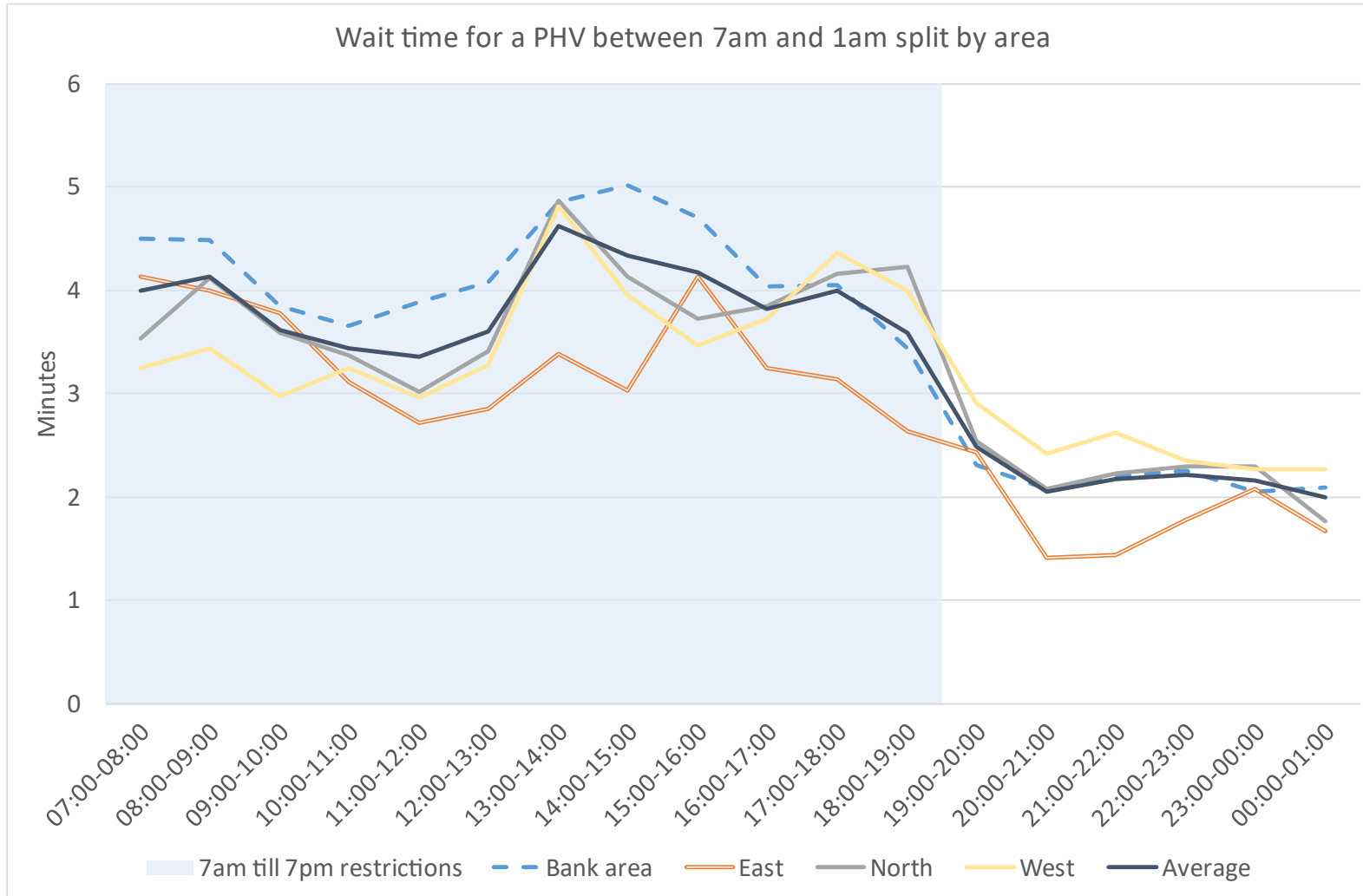
Wait time variations for either taxis or PHV's across areas was low, with longest and shortest wait times differing by a maximum of two minutes. All locations show a lower wait time between 9:00 and 16:00 before peaking at 19:00 (Figure 3-11).

Wait time for PHV's vary slightly more throughout the day. Wait times were highest for PHVs between 07:00 and 17:00 around Bank Junction, but average wait times were never more than 2 minutes longer than other areas, suggesting relatively little variation in absolute wait times in different parts of the City at that time of day. After 17:00 the West shows the highest wait time for most of the survey period except 18:00-19:00 where the North exceeds it (Figure 3-12, page 37).

**Figure 3-11 - Wait time for taxis by area**



**Figure 3-12 - Wait time for PHVs by area**





The key findings from this data collection exercise show minimal variations in wait times across the city. For both PHVs and taxis, the recordings in Bank area were within 20 seconds of the average for other areas. It appears to show there is little to no impact on wait times as a result of Bank junction restrictions. There are minor increased in wait times at the peak time of 18:00. This is expected as this is when there would be high demand at the end of the working day. Even at peak wait time this is only seven minutes. At 19:00 a small reduction in wait times can be seen by all areas, this could be as a result of vehicles becoming available again, or due to the end in restrictions.

On a location by location basis those streets with restrictions, such as limited access or time constraints, tend to have longer average wait times for a taxi via an app than those streets without. However, the average time difference is not significant.

### **3.3 WESTMINSTER DATA**

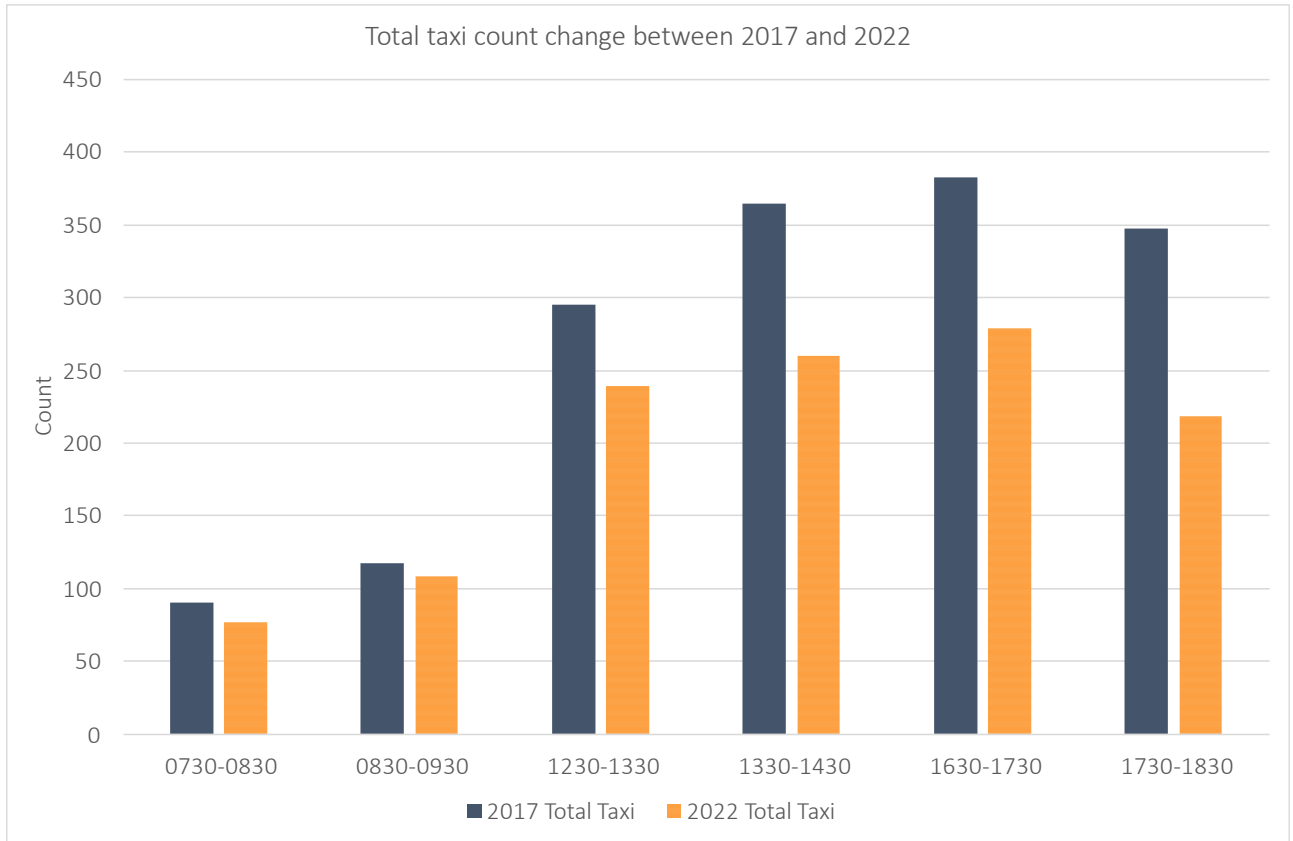
The evolution of taxi volumes in Westminster before and after the onset of the COVID-19 pandemic was investigated by considering several metrics including the proportion of taxis within the overall traffic, the absolute number of taxis by day, and data segmented by hourly intervals. The data was collected by Westminster City Council at several sites in 2017 (pre COVID-19) and 2022. It should be noted that traffic volume may have increased since the last set of data collection was undertaken as the return to the office in 2023 was more pronounced.

#### **3.3.1 OXFORD STREET**

Oxford Street in Westminster has experienced a substantial decline in the overall number of taxis since 2017. The most significant drop in the number of taxis occurred between 17:30 and 18:30, where a 37% decrease was observed. In contrast, the period from 08:30 to 09:30 witnessed the least decline in taxi numbers, with only an 8% reduction (Figure 3-13, page 40). On average, across all time intervals, there was a 26% decrease in taxi availability. This follows the expected wider pattern in London which shows the number of taxis travelling through the congestion zone in operational hours has fallen approximately 40% between 2017 and 2022, and that taxi licenses fell by approximately 30% in the same time (Section 4).

Oxford Street data is represented hour by hour in the graph below, for the two-hour AM and PM peaks and the lunchtime two-hour peaks.

**Figure 3-13 - Oxford Street taxi numbers between 2017 and 2022**





The broader traffic trends in Westminster show an average 36% decrease in traffic volume from 2017 to 2022 across all time periods. The most significant drop in the number of vehicles occurred between 07:30 and 08:30 where a 42% drop was observed. Between 12:30 and 13:00 saw the least reduction in vehicles, at a 29% reduction (Figure 3-14).

**Figure 3-14 - Oxford Street vehicle numbers between 2017 and 2022**

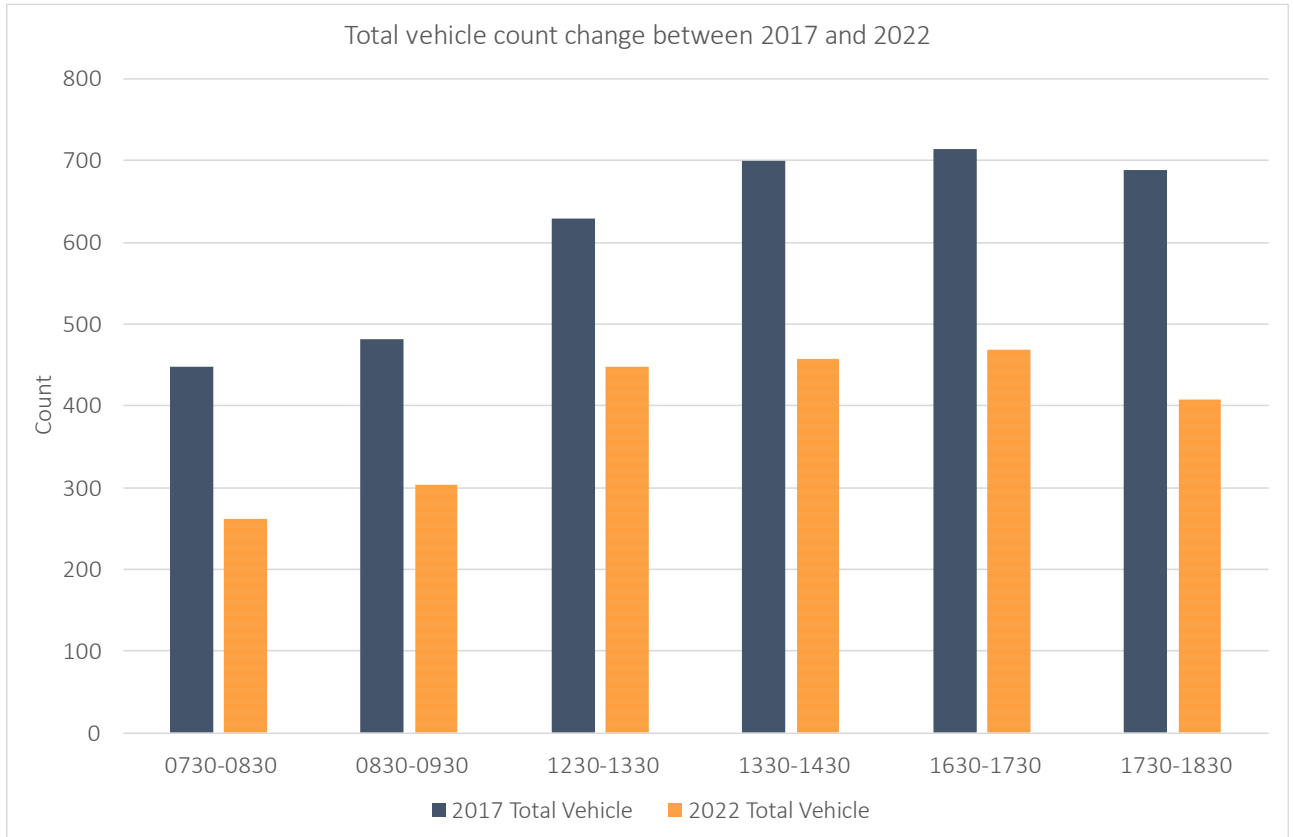
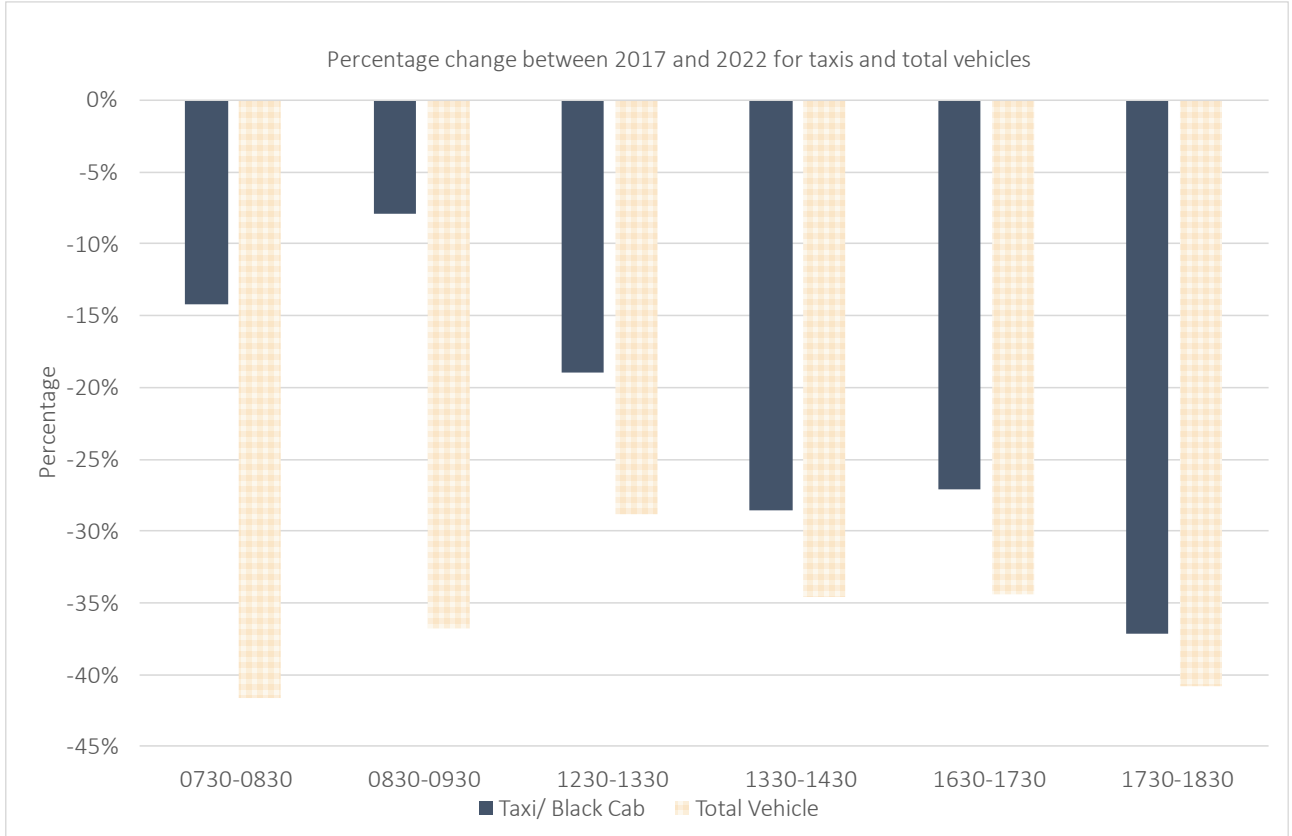


Figure 3-15 shows that taxi/ black cab numbers have fallen less than total vehicle counts across all time periods.

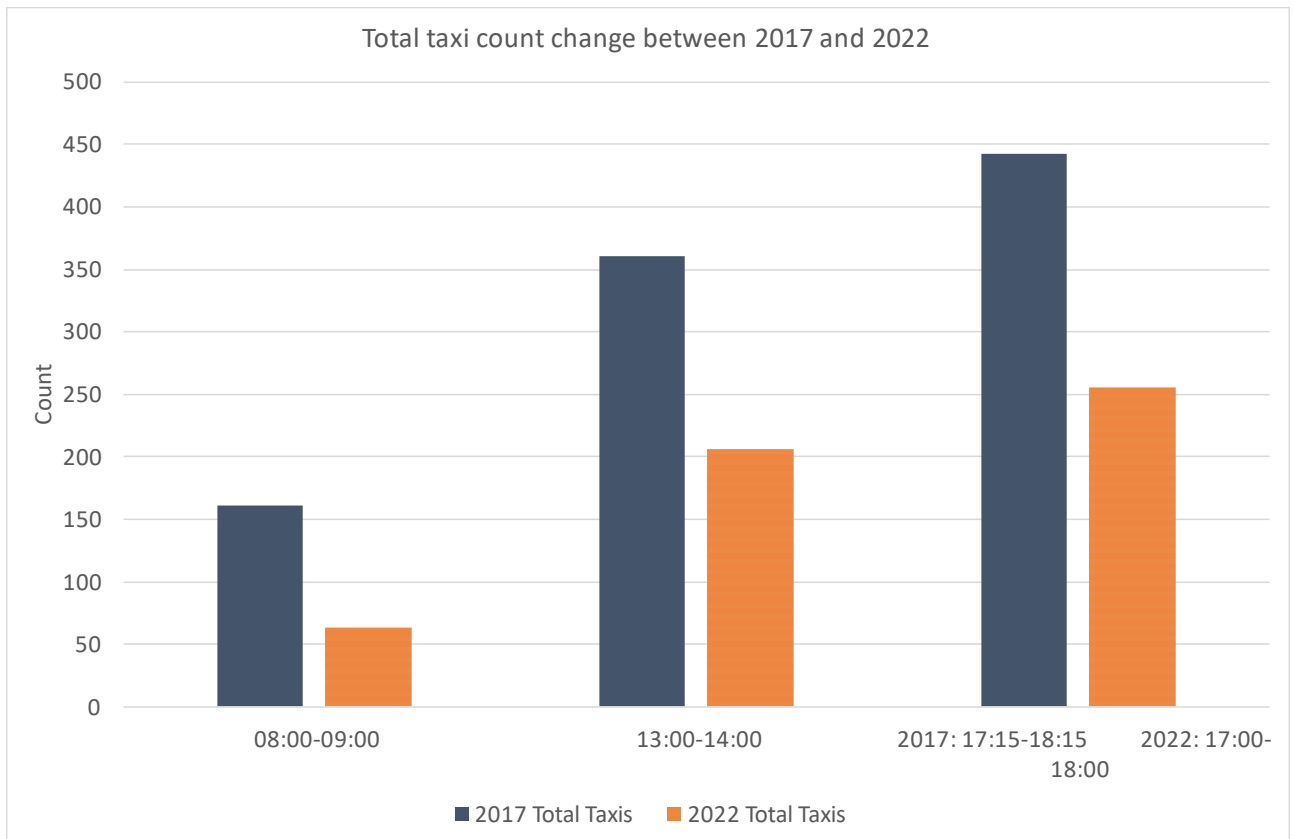
**Figure 3-15 - Percentage change between 2017 and 2022 for taxi/black cabs and total vehicles**



### 3.3.2 REGENT STREET

Taxi numbers on Regent Street in Westminster has experienced a 46% decrease between 2017 and 2022. The most significant drop in the number of taxis occurred between 08:00 and 09:00, resulting in a 61% decrease, there was a 43% decrease in taxis between 13:00 and 14:00, and a 42% reduction between 17:15 and 18:15 (2022: 17:00 and 18:00). This reduction follows patterns seen in the wider London area of the number of taxis travelling through the congestion zone in operational hours falling approximately 40% between 2017 and 2022, and taxi licenses falling by approximately 30% in the same time (Section 4).

**Figure 3-16 - Total taxi count change between 2017 and 2022**



The broader traffic trends on Regent Street show an average 18% decrease in traffic between 2017 and 2022 for all time periods. There was a 13% decrease in traffic between 08:00 and 09:00, a 27% decrease in traffic between 13:00 and 14:00, and a 15% decrease between 17:15 and 18:15 (2022: 17:00-18:00) (Figure 3-17).

**Figure 3-17 - Total vehicle count change between 2017 and 2022**

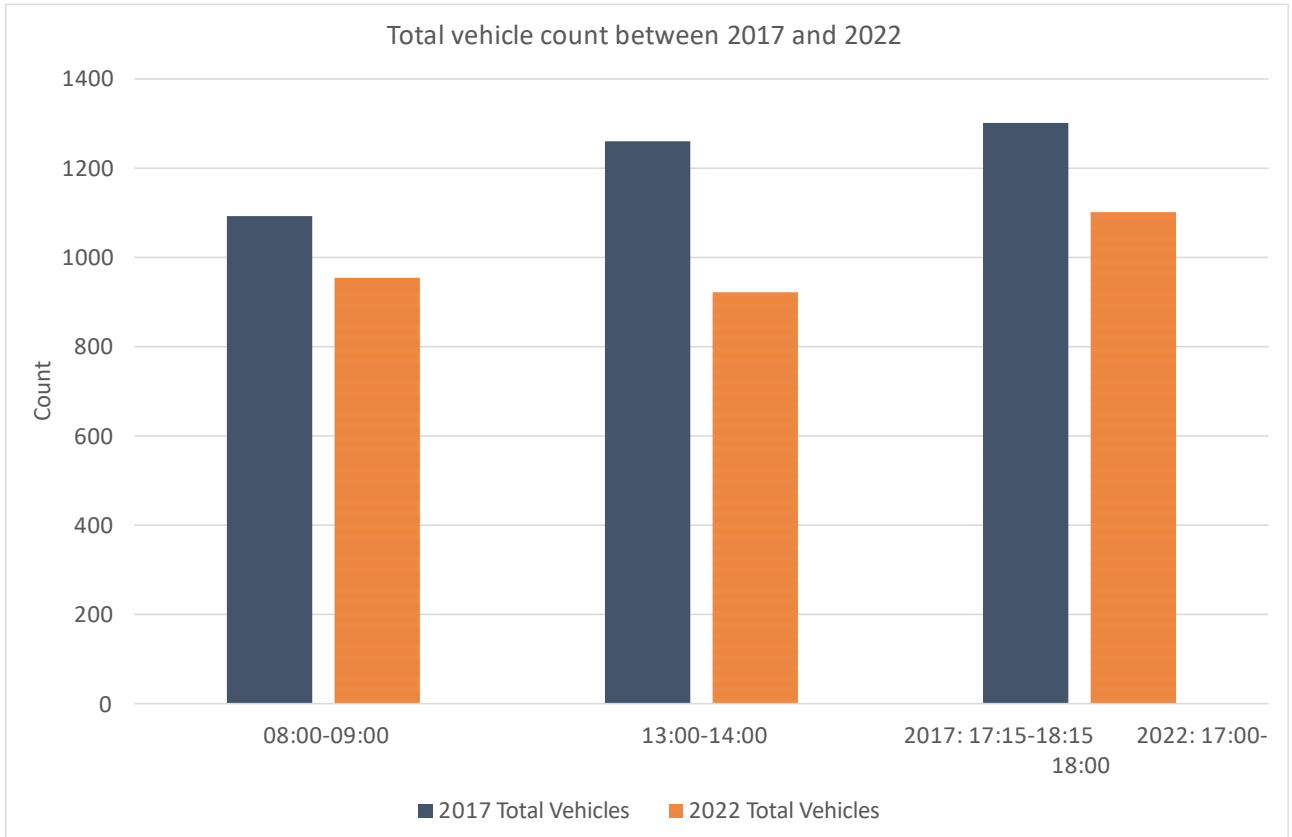
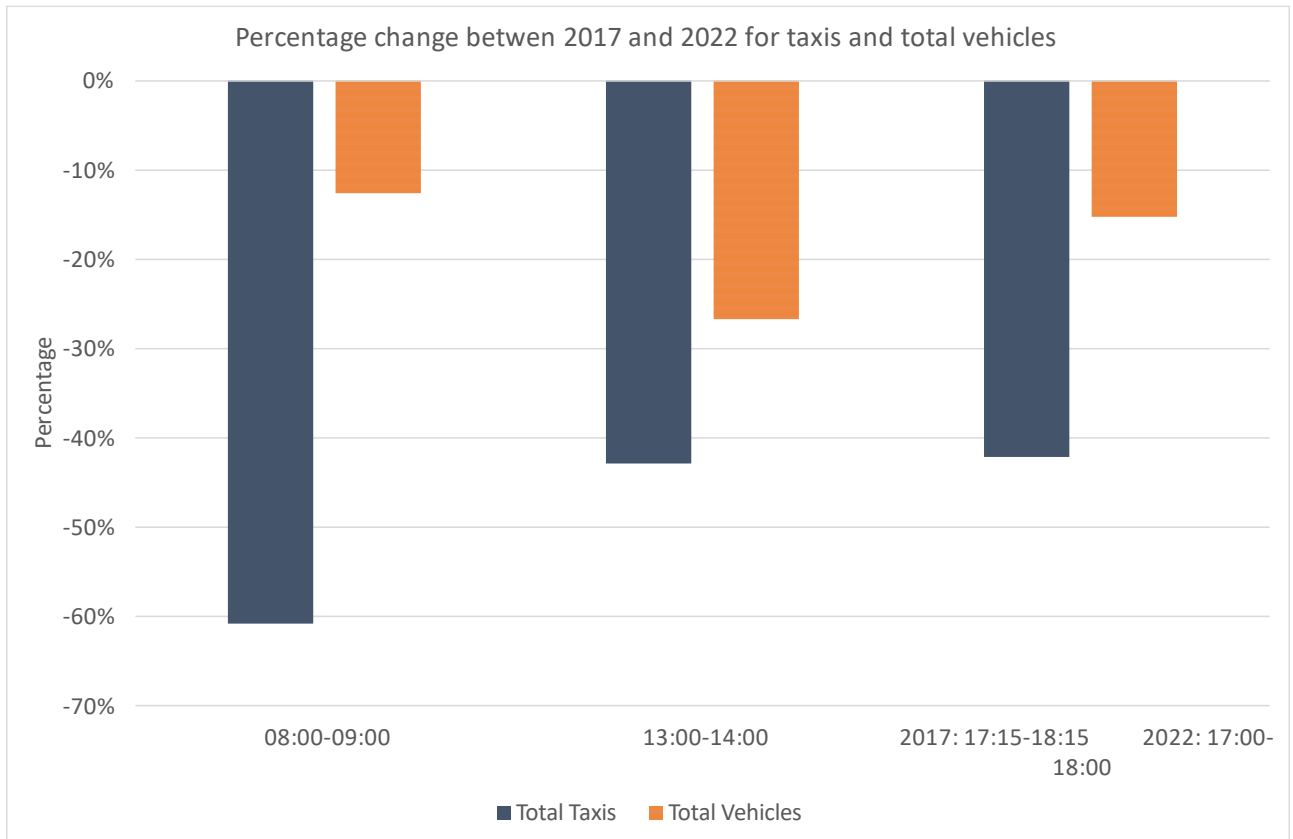


Figure 3-18 shows that taxi/ black cab numbers have fallen more than total vehicle counts across all time periods. This is particularly evident between 08:00 and 09:00 where taxi/ black cab availability has fallen over 60%, but vehicle counts only 13%.

**Figure 3-18 - percentage change between 2017 and 2022 for taxi/black cabs and total vehicles**



### Westminster and City of London Comparison

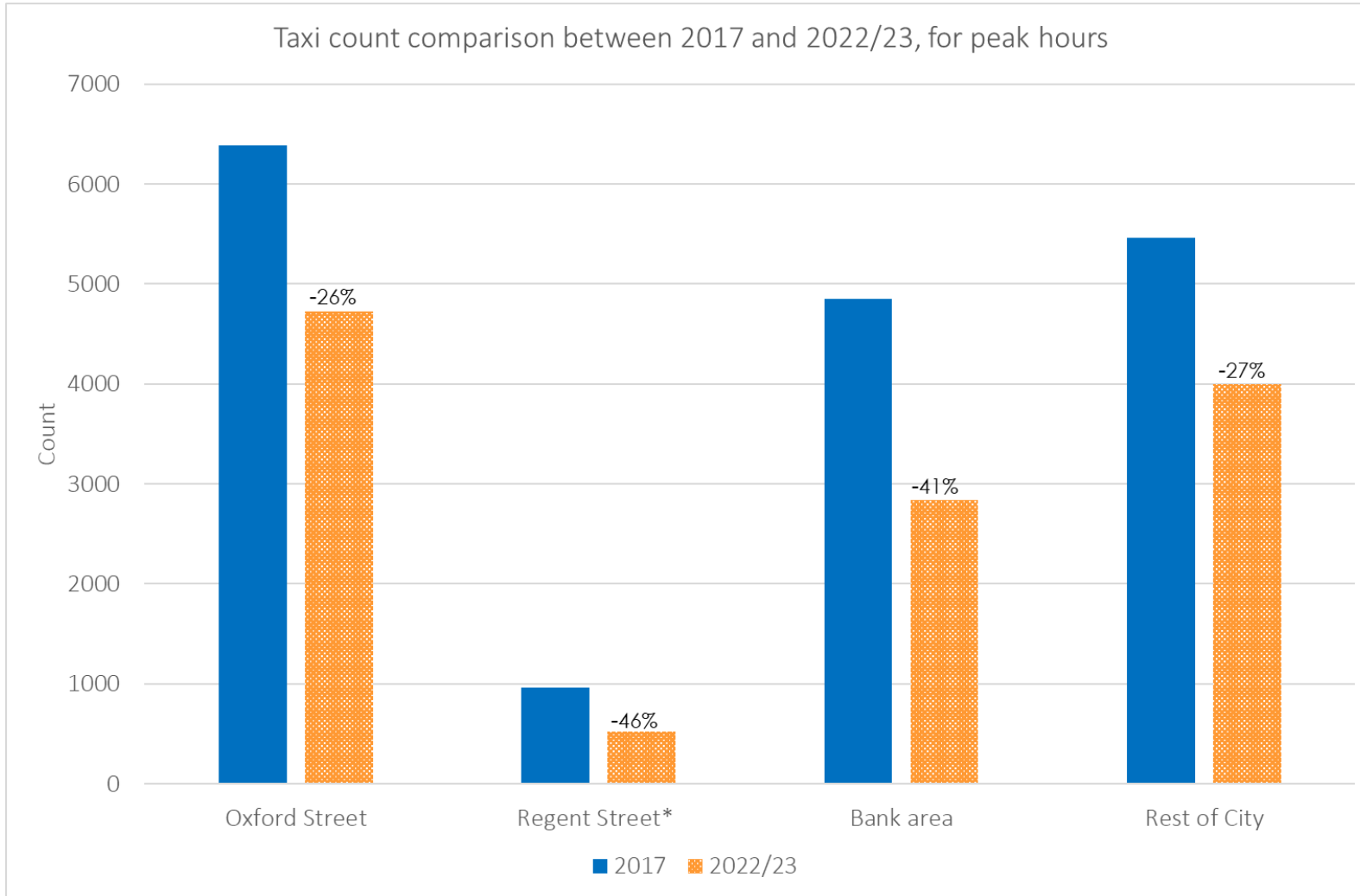
Comparison between Westminster and the City of London locations can be seen in Table 3-2 and Figure 3-19 (page 47). All locations saw more than a 25% decrease in taxi volumes from 2017 to 2022/23. The minimum change was 26% reduction seen by Oxford Street locations, and the maximum change was seen in the Regent Street location at 46% reduction. Bank area has a 41% reduction in taxis.

**Table 3-2 - Taxi number comparison between 2017 and 2022/23, for peak hours (approx. 08:00-10:00, 12:00-14:00, 17:00-19:00) \* for multiple sites**

	<b>2017 taxi volumes</b>	<b>2022/23) taxi volumes</b>	<b>Absolute change</b>	<b>% change</b>
Oxford Street	6389	4729	-2660	-26%
Regent Street*	965	525	-440	-46%
Bank area	4846	2840	-2006	-41%
Rest of City	5457	3999	-1458	-27%

*\*Regent Street sites peak hour counts were for one hour only.*

**Figure 3-19 - Taxi number comparison between 2017 and 2022/23, for peak hours for multiple sites**





Overall, this data collection suggests that drops in taxi volumes are not unique to the City, or in particular the Bank area. Both areas analysed in Westminster saw a reduction of taxis from between 2017 and 2022/23 (-26% and -46%). This is also the pattern shown in the Bank area (-41%). This is supported by information in Section 4 which shows that the number of taxis travelling through the congestion zone in operational hours has fallen approximately 40% between 2017 and 2022, and that taxi licenses fell by approximately 30% in the same time.



### 3.4 MANUAL TAXI AVAILABILITY SURVEY

Manual taxi count surveys were undertaken to record the number of taxis passing the survey location in both directions, whether they have their lights on or off and how many passengers they were carrying.

Throughout this analysis, data has been compared by site and by ‘area’ as split out in Figure 2-1 (page 7). In total 56,450 taxis were counted in 2016 across 17 sites, these were counted before restrictions were implemented. In comparison, 23,307 taxis were counted at the same sites in 2023 after the restrictions were implemented. The 2023 data recorded the Bank area having 5,030 recorded taxis, East has 766, North 7,204, and West 10,307.

In total, 20 sites were analysed in 2023. 17 of these locations were compared to data from 2016 and the three additional sites were Chancery Lane, Leadenhall and Minories.

Table 3-3 is split into 5 colours ranging from white to dark blue. It is visible that many locations had hour time slots with 0 or less than 6 taxis an hour passing with their light on, with the minimum average wait for taxi being 10 minutes. Cheapside had the least available taxis with only 18 passing in the complete survey period, followed by Queen Victoria Street with 35 taxis.

Holborn Viaduct and Fleet Street had the most frequent taxis per hour, with over 60 taxis per time slot, with a maximum average wait time of around one minute on these roads.

#### Key

Colour	Count of taxis
Grey	Non operational hours
White	0
Light blue	1-5
Medium blue	6-11
Medium/dark blue	12-59
Dark blue	60+



**Table 3-3 - Heat map showing number of taxis with their light on by locations for 24 hours**

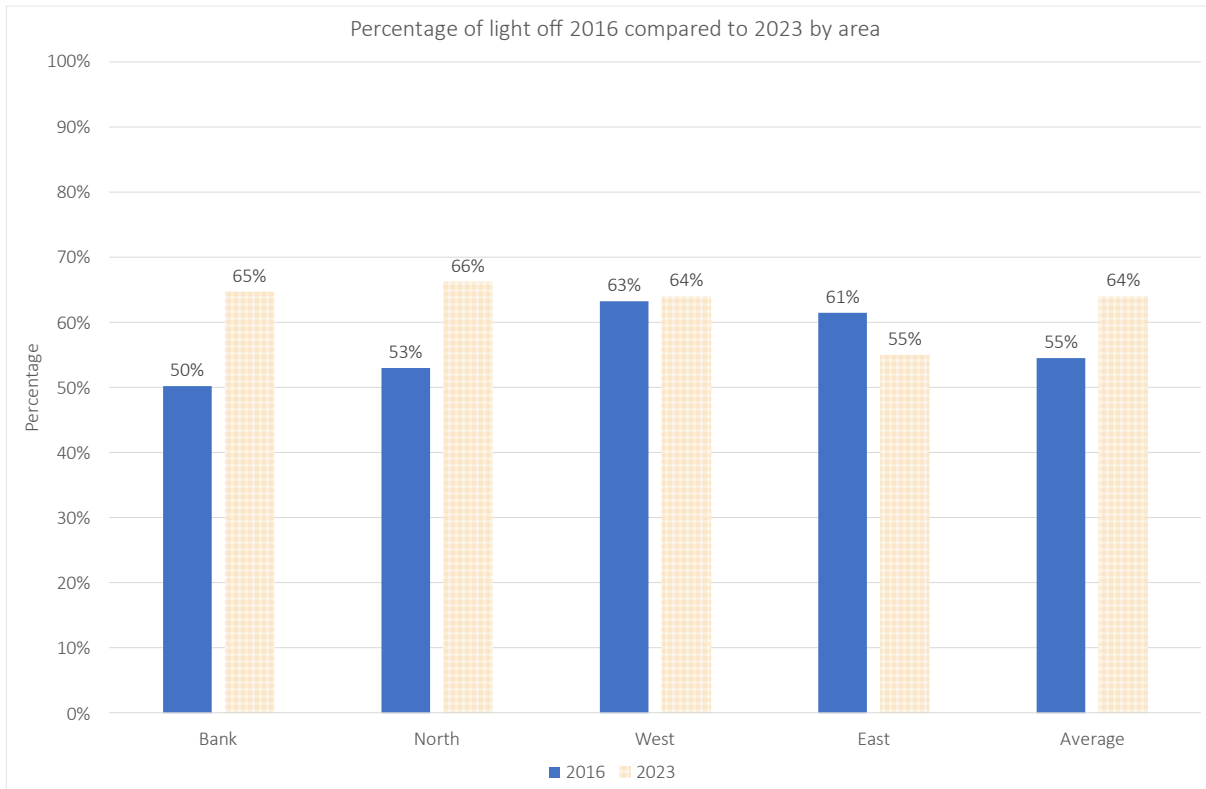
	7-8am	8-9am	9-10am	10-11am	11-12am	12-1pm	1-2pm	2-3pm	3-4pm	4-5pm	5-6pm	6-7pm	7-8pm	8-9pm	9-10pm	10-11pm	11-12am	12-1am	Total
Aldersgate Street	18	42	52	34	50	40	42	32	38	16	85	58	31	75	40	5	30	33	721
Beech Street/Silk Street	33	16	38	41	47	46	24	39	26	41	41	59	69	54	84	46	14	24	742
Bishopsgate	10	7	15	16	19	18	26	17	9	3	5	16	41	109	85	22	78	77	573
Chancery Lane	2	10	16	21	39	40	43	49	34	56	34	6	11	17	14	1	3	2	398
Cheapside	0	0	0	2	0	0	4	0	0	0	1	0	0	1	2	0	1	0	11
Cornhill	1	4	1	4	5	6	4	10	7	5	1	1	0	3	7	6	4	5	74
Farringdon /New Bridge St	12	24	25	41	47	37	48	22	44	40	32	18	25	37	24	9	13	9	507
Fleet Street	45	52	85	87	133	95	131	146	86	108	79	11	35	123	43	6	13	23	1301
Gracechurch/Fenchurch St	17	29	33	40	29	29	20	25	16	8	14	12	20	17	18	9	4	5	345
Gresham Street	16	34	22	55	45	53	43	35	39	54	64	35	40	25	12	11	5	12	600
Holborn Viaduct	44	71	159	95	192	124	143	119	95	120	151	27	155	185	26	85	93	15	1899
King William Street	3	1	0	1	1	2	0	2	8	2	9	2	14	15	16	12	7	13	108
Leadenhall	4	6	12	18	34	47	43	33	37	27	16	8	32	24	16	14	7	6	384
London Wall - Wood Street	16	27	42	51	38	42	53	48	43	46	30	11	27	53	32	9	9	9	586
Minories	24	19	13	27	57	61	55	45	41	47	26	13	39	24	18	17	9	9	544
Moorgate	4	17	23	38	33	33	21	17	17	31	16	14	30	25	14	4	5	7	349
Poultry	3	2	2	1	4	8	1	1	2	1	3	3	5	14	5	11	5	9	80
Princes Street	2	4	1	3	4	3	8	11	2	23	21	25	60	54	28	38	19	15	321



	7-8am	8-9am	9-10am	10-11am	11-12am	12-1pm	1-2pm	2-3pm	3-4pm	4-5pm	5-6pm	6-7pm	7-8pm	8-9pm	9-10pm	10-11pm	11-12am	12-1am	Total
Queen Victoria Street	4	0	0	0	1	0	2	1	2	2	0	0	0	0	0	0	0	0	12
Threadneedle Street	9	16	23	18	23	24	18	20	20	13	7	6	7	4	4	1	3	4	220

14 out of 17 sites have had an increase in percentage of taxis with their light off, showing more taxis are unavailable in 2023 compared to 2016 (Figure 3-21).

**Figure 3-20 - Percentage of light off 2016 compared to 2023 by area**



In figure 3.20

Of these taxis with the light off, on average across the full survey period, 75% of taxis in Bank had passengers in. This compared to of 85% in the North, 70% in East and 84% in the West (Figure 3-20). This shows that although Bank had the greatest increase in proportion of taxis with their lights off in the area, they have approximately the same likelihood that lights off are due to carrying passengers and there is no evidence to suggest that taxis are turning lights off and dead running around Bank to other locations.

**Figure 3-21 - Percentage of taxis counted with their light off comparison 2016 compared to 2023 split by all sites**

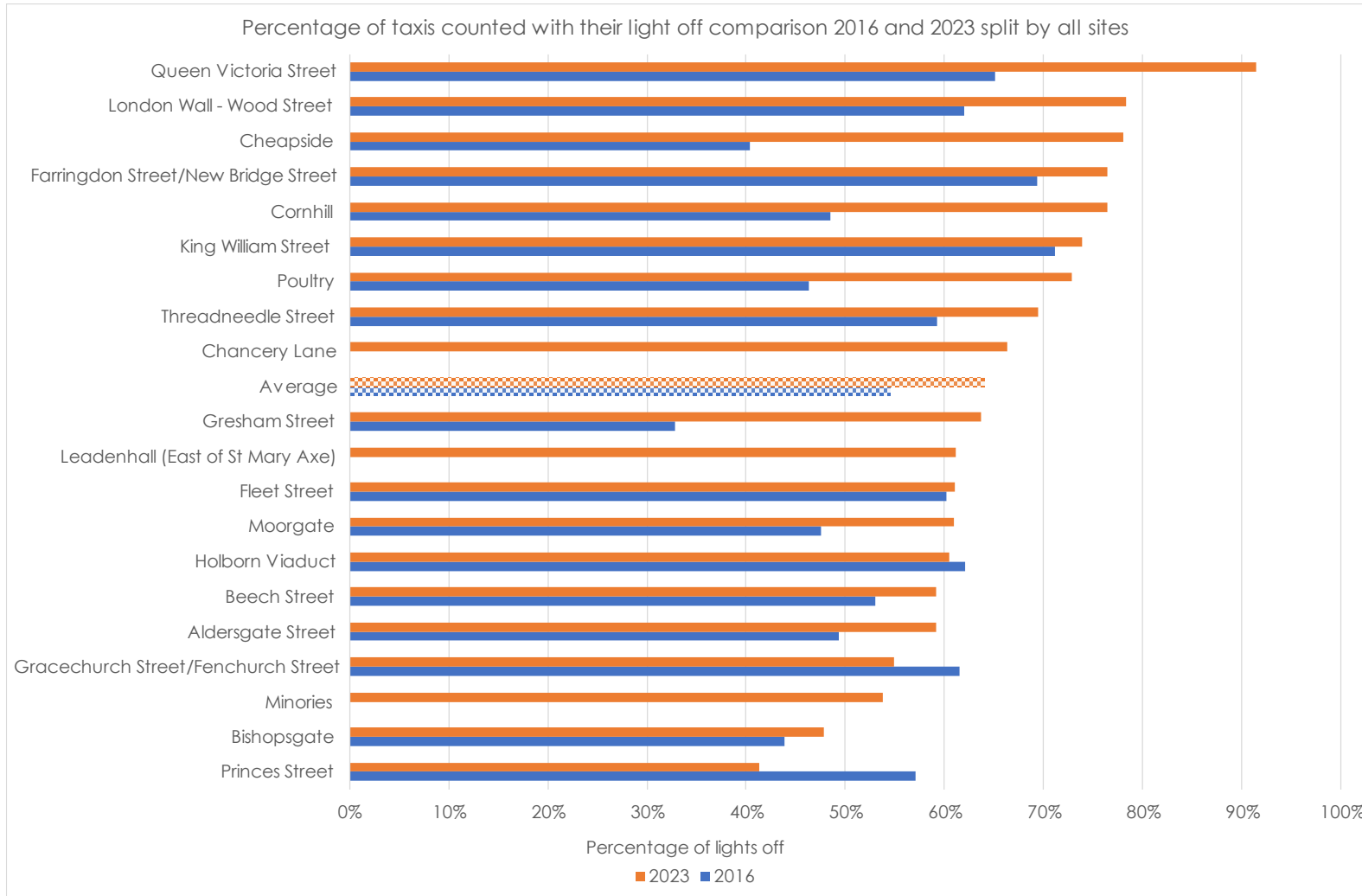
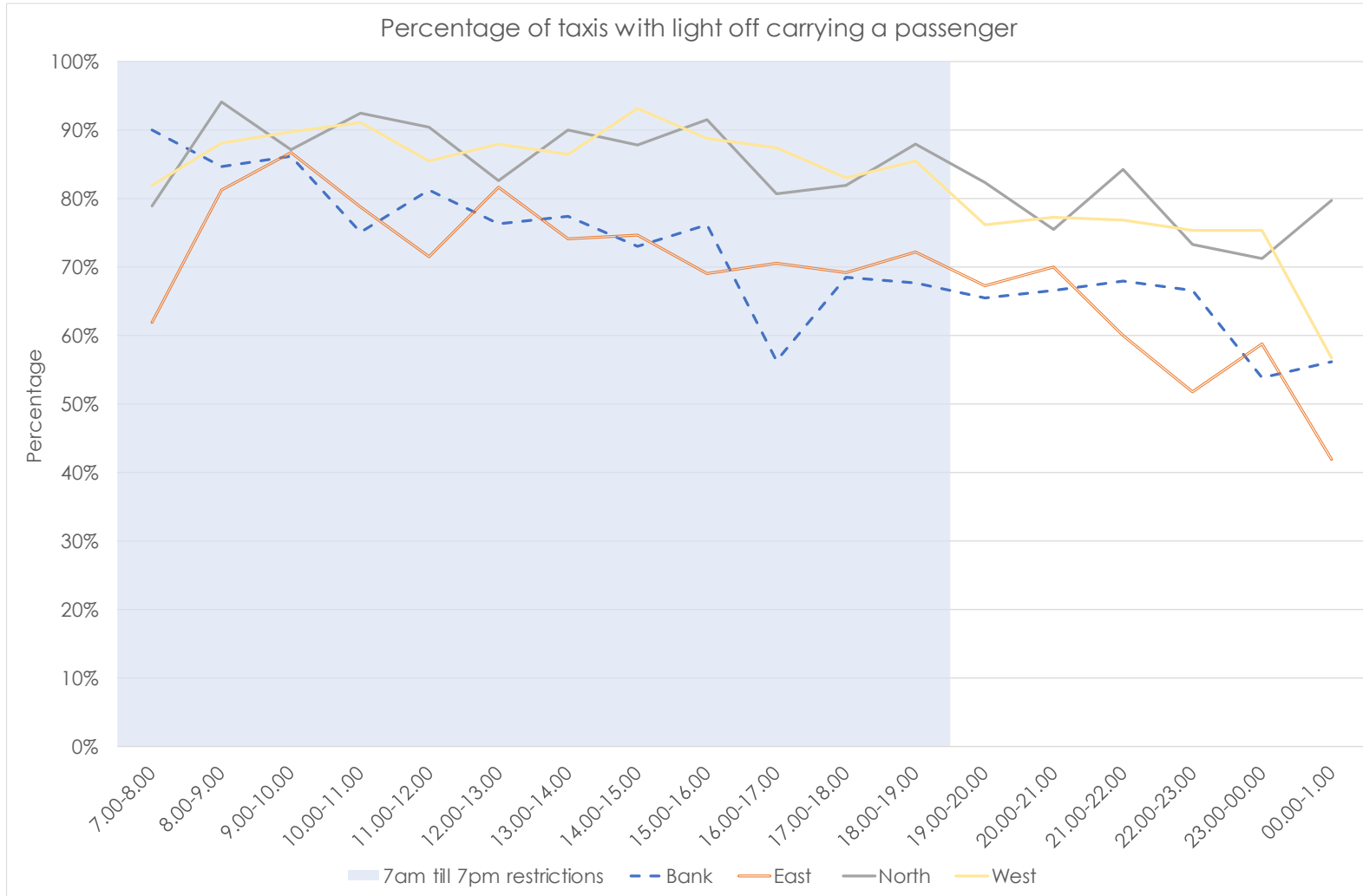


Figure 3-22 shows that the majority of taxis with their lights off are carrying passengers, and that Bank area is comparable to the East, but the North and West areas have a slightly higher percentage with passengers in.

Bank recorded the highest occurrence of taxis operating with their lights off but empty between 16:00 and 17:00, and 23:00 and 00:00, during which approximately 55% of such taxis were occupied. In the East, the highest count of empty taxis occurred from 00:00 to 01:00, with only 42% taxis carrying passengers. The West exhibited the lowest proportion of empty taxis between 00:00 and 01:00, standing at 57% containing passengers. The North experienced the highest percentage of occupied taxis throughout the day, remaining at over 70%.

Comparing the manual count availability surveys with the taxi rank usage on the same streets draws little conclusions from the dataset. Cheapside with the 2023 restriction in place (not allowing taxis through) still had relatively high taxi rank usage. It is likely this is increased due to its location outside One New Change. Farringdon Street has a high number of taxis travelling along it with lights on, but very low taxi rank usage which is a similar situation to Leadenhall Street. As above, a rank review could be undertaken with the taxi trade to consider how to optimise their use or repurpose if ranks are no longer as necessary with hailing apps.

**Figure 3-22 - Percentage of taxis with light off carrying a passenger**

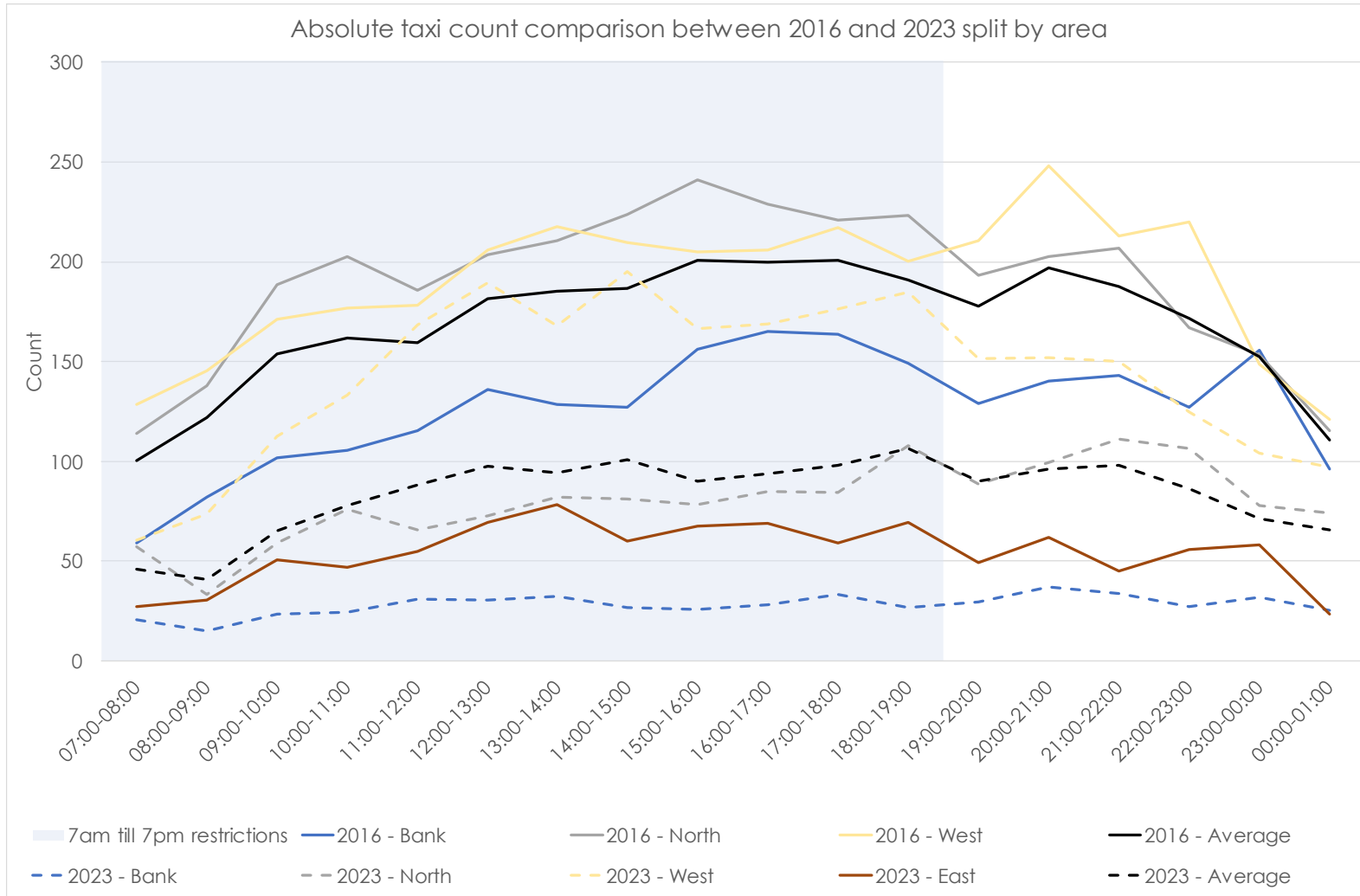




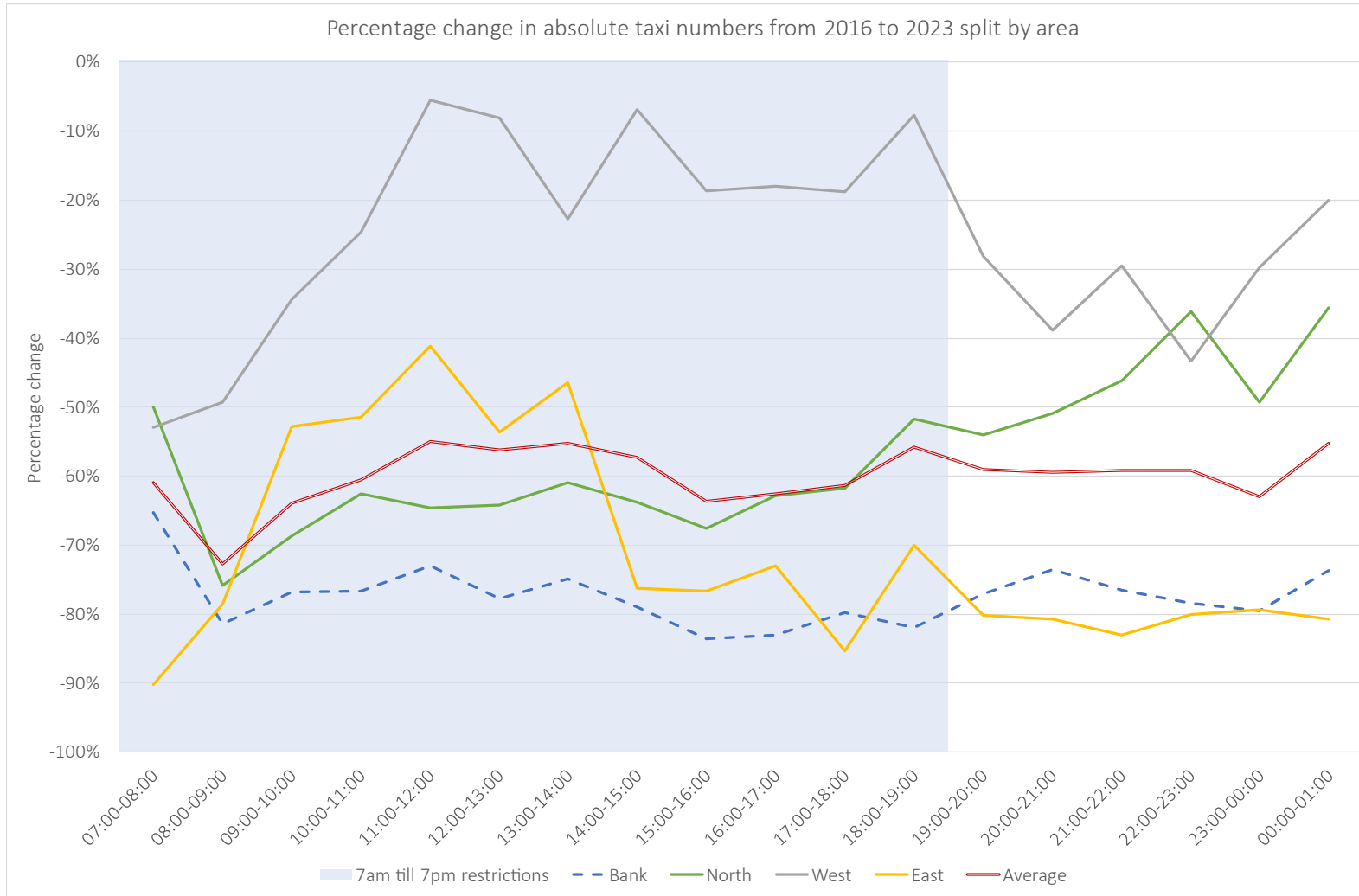
All areas showed a drop in absolute taxi numbers when comparing data from 2016 to 2023 (Figure 3-23). Figure 3-24 (page 58) shows that Bank area has a greater than average percentage decrease in taxis across the whole survey period. Both the East and North sites also showed a larger decrease in taxis than the average of all sites. In the East, the taxi numbers decreased more than average before 09:00 and after 14:00. The North was between 09:00 and 17:00. This decrease is also likely in part due to a wider 30% decrease in licensed taxis in London between the years, as discussed in Section 4.



**Figure 3-23 - Absolute taxi count comparison between 2016 and 2023 split by area**



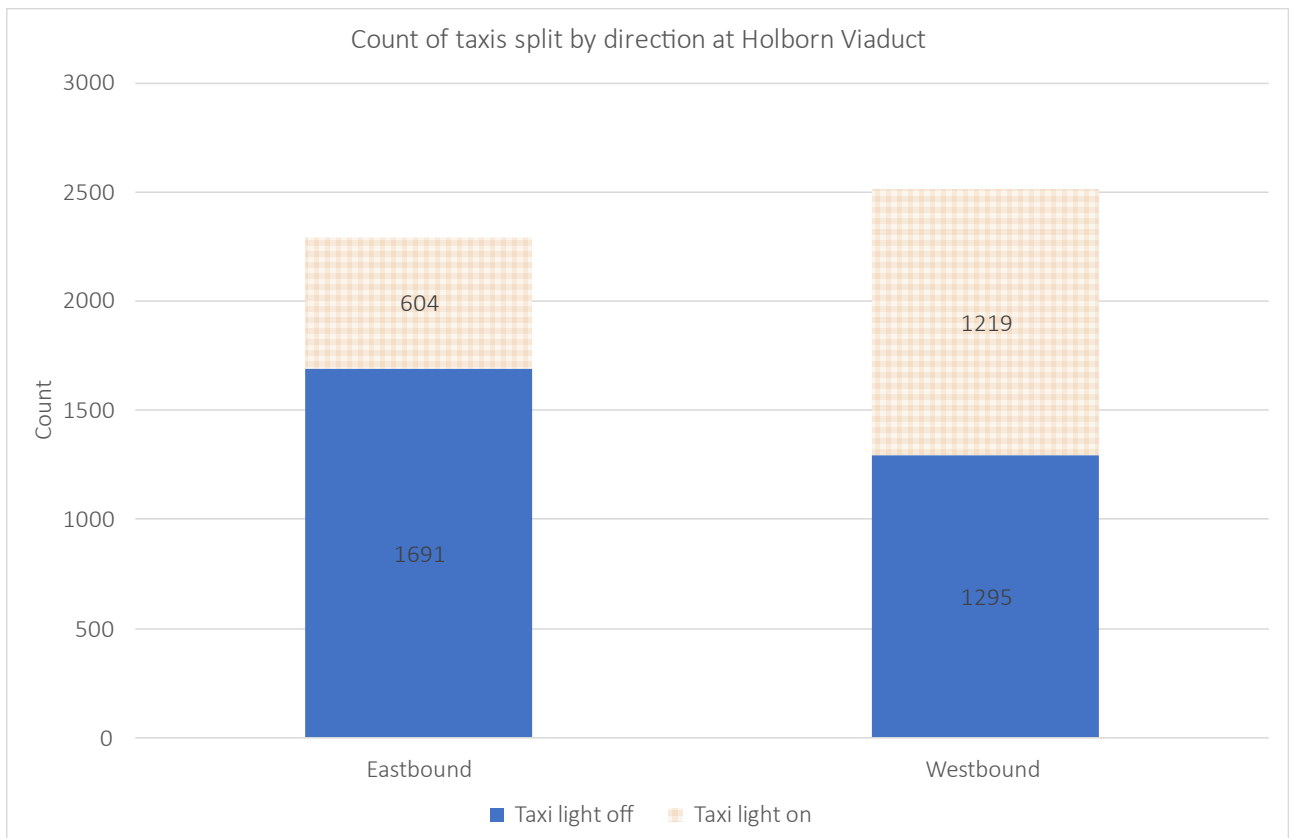
**Figure 3-24 - Percentage change in absolute taxi numbers from 2016 to 2023 split by area**



Further analysis was undertaken to look at the count of taxis at Holborn Viaduct. This was looked at by direction to see how availability changed in and out of the city and Bank area.

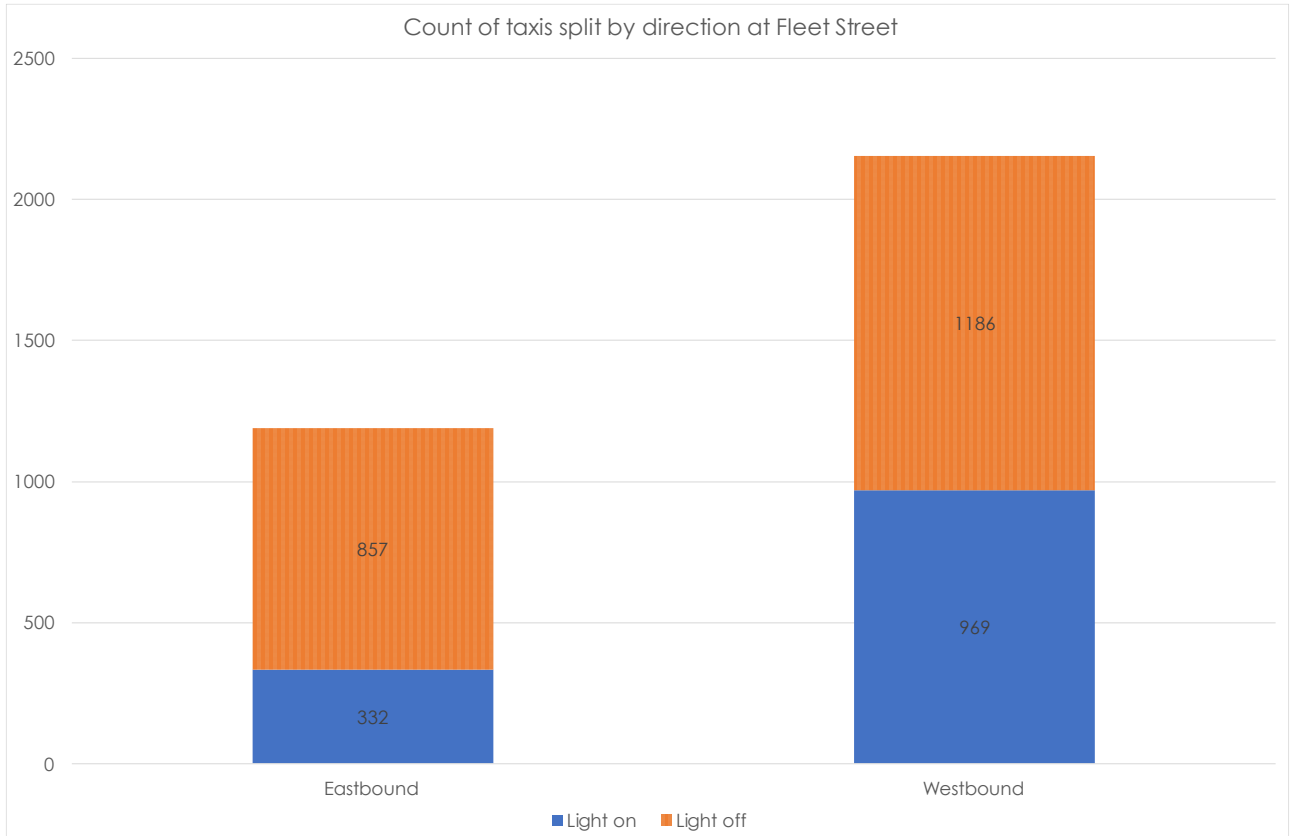
Figure 3-25 shows that overall less taxis were recorded travelling eastbound into the Bank area than were recorded westbound coming out of the Bank area. Eastbound a higher proportion of taxis had their light off, showing busy or unavailable, than had their light on. Of those taxis travelling westbound out of the Bank area, almost 50% had their light on showing availability.

**Figure 3-25 - Count of taxis split by direction at Holborn Viaduct**



At Fleet Street, almost half the number of taxis were recorded going eastbound into the Bank area than were seen coming westbound out of Bank. Both Eastbound and Westbound had a very similar number of taxis with their lights off, but the number of taxis with their light on coming away from Bank area was three times that of coming into the area (Figure 3-26).

**Figure 3-26 - Count of taxis split by direction at Fleet Street**



In general, the Bank area exhibits lower taxi availability, which is to be expected as many of these streets are no longer through routes by car or taxi during the day. Additional data is required to assess how this compares to other local access streets that are not through routes to destinations. The numbers remain relatively stable outside of the 7 AM to 7 PM restrictions, indicating that the problem may not solely stem from the ability to pass through Bank.

### 3.5 JOURNEY TIME SURVEY

This section looks at four location pairs and the time it took to drive between them. The origin destination pairs were:

- 1- Southwark Street to Silk Street (via London Bridge);
- 2- Whitechapel High Street to Blackfriars Station;
- 3- Fenchurch Street Station to Giltspur Street; and
- 4- Liverpool Street to Queen Street.

All origin destination pairs were allocated at least two routes for journey time surveying, with two pairs given a third route via Bishopsgate for additional data collection.

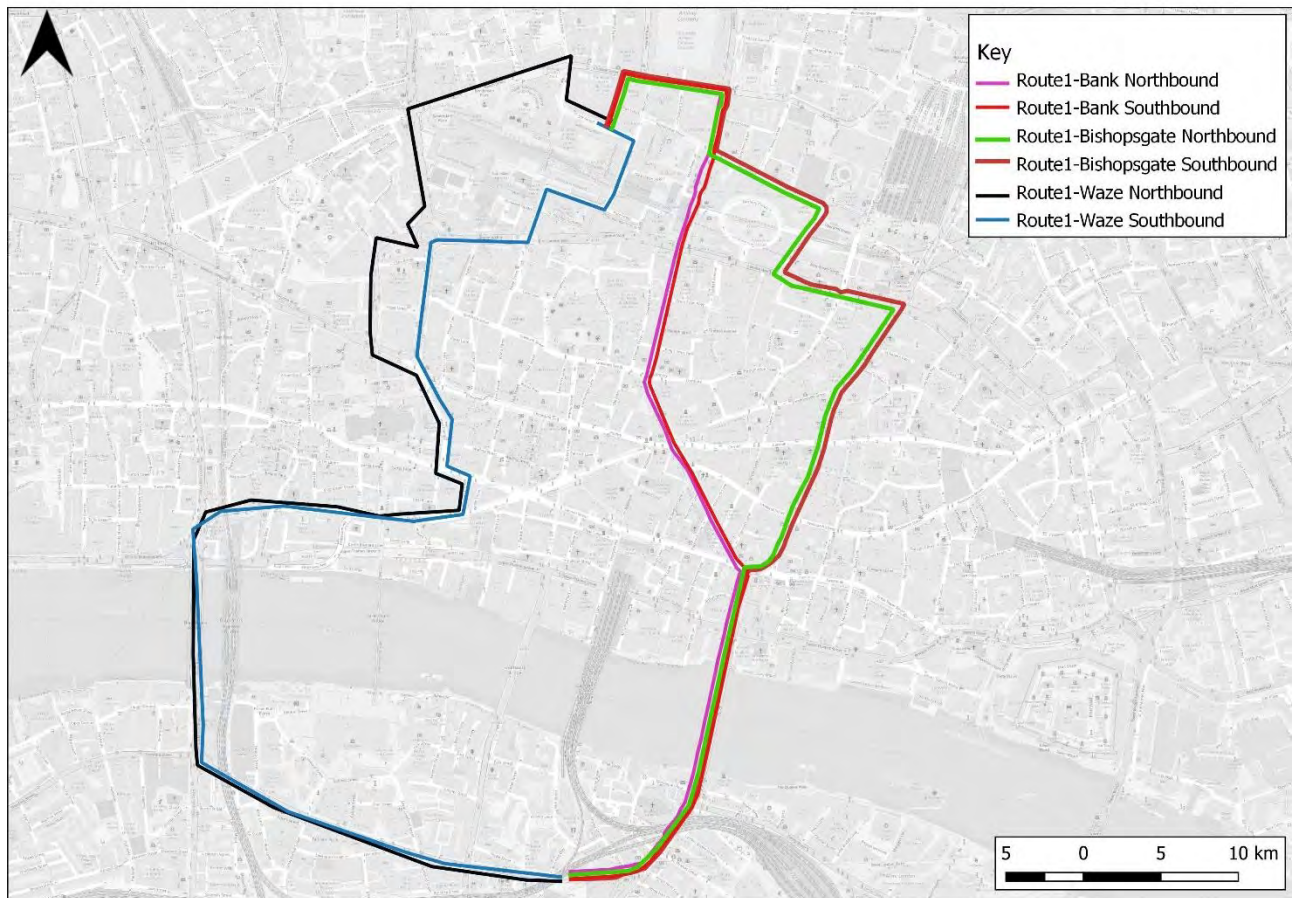
These route options were:

- 1- Take the vehicle through Bank Junction;
- 2- To be taken along Bishopsgate; and
- 3- Take the vehicle along the fastest route that observes all relevant traffic restrictions in place between 7am and 7pm using the Waze app.

At the time of the survey being completed Bank junction had temporary lights operating. These had the potential to add up to 2 minutes onto a journey time run. For the purpose of the study, vehicles were allowed to pass through Bank restrictions for the Bank route, and Bishopsgate for that route. All other restrictions were observed, such as Cheapside Bus Gate between Bread Street and Bow Lane. This restriction has since been removed. A breakdown of each run time can be found in Appendix D.

'Origin-destination pair' one was Southwark Street to Silk Street (via London Bridge).

**Figure 3-27 - Origin destination pair one:Southwark Street to Silk Street (via London Bridge)**



The journey time surveys demonstrated a mean travel time of 15 minutes 51 seconds across all route options. The quickest route Northbound was through Bank at 14 minutes 54 seconds. The slowest was the route chosen via Waze at 20 minutes and 26 seconds. The Waze route appears to be the longest which can be explained as London Bridge has restrictions on allowing only buses, motorcycles, and taxis. The driver performing the journey time survey was unable to drive across London Bridge and therefore had to take a longer route. Due to this, it appears that opening up Bank restrictions to allow taxis would decrease the journey time for Northbound journeys, however this is one of only two routes pairs out of 8.

The quickest route Southbound was Waze at 13 minutes and 36 seconds, and the slowest route was via Bank at 16 minutes and 29 seconds (Figure 3-28). Opening up Bank junction to taxis would not result in a reduction to journey times.

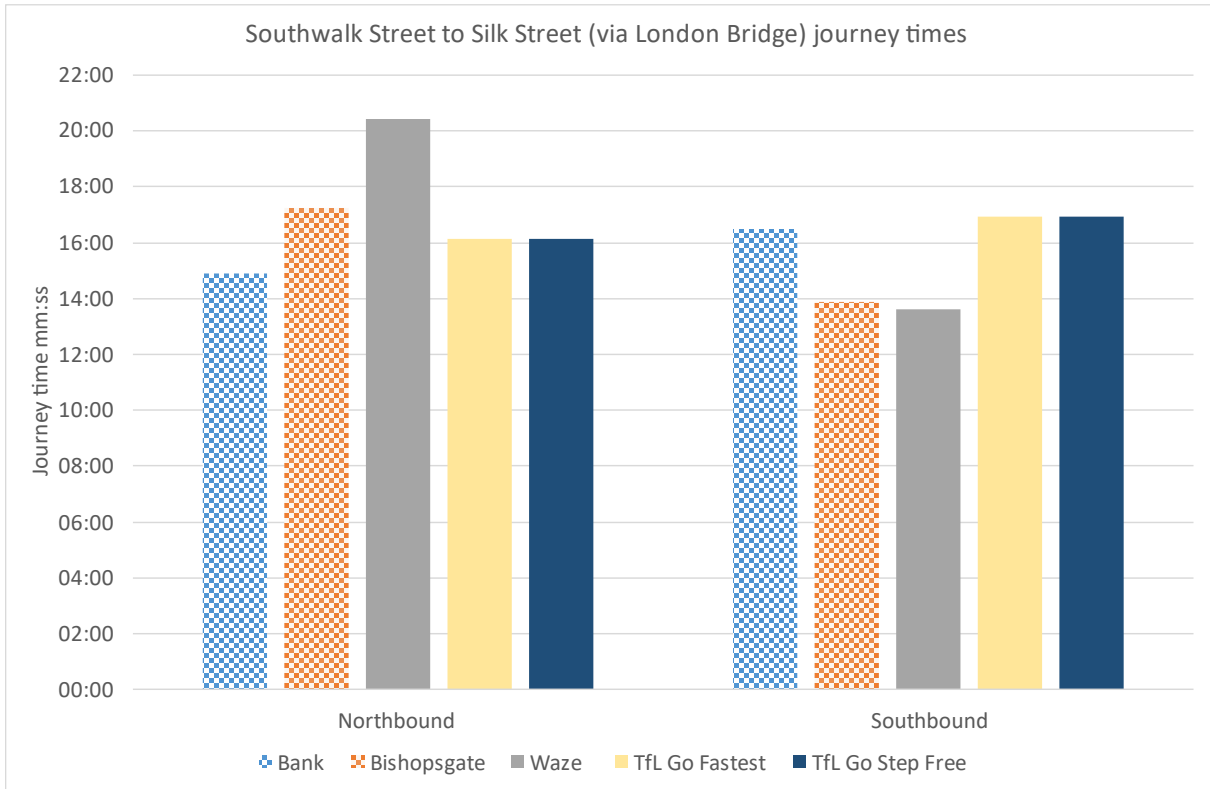
TfL Go was used to find the comparable journey via public transport looking at the fastest option and step free. Both options Northbound were over 16 minutes on average, and Southbound nearly 17 minutes making this option one of the slowest compared to driving through Bank or Bishopsgate. All route options in both directions were within 5 minutes of



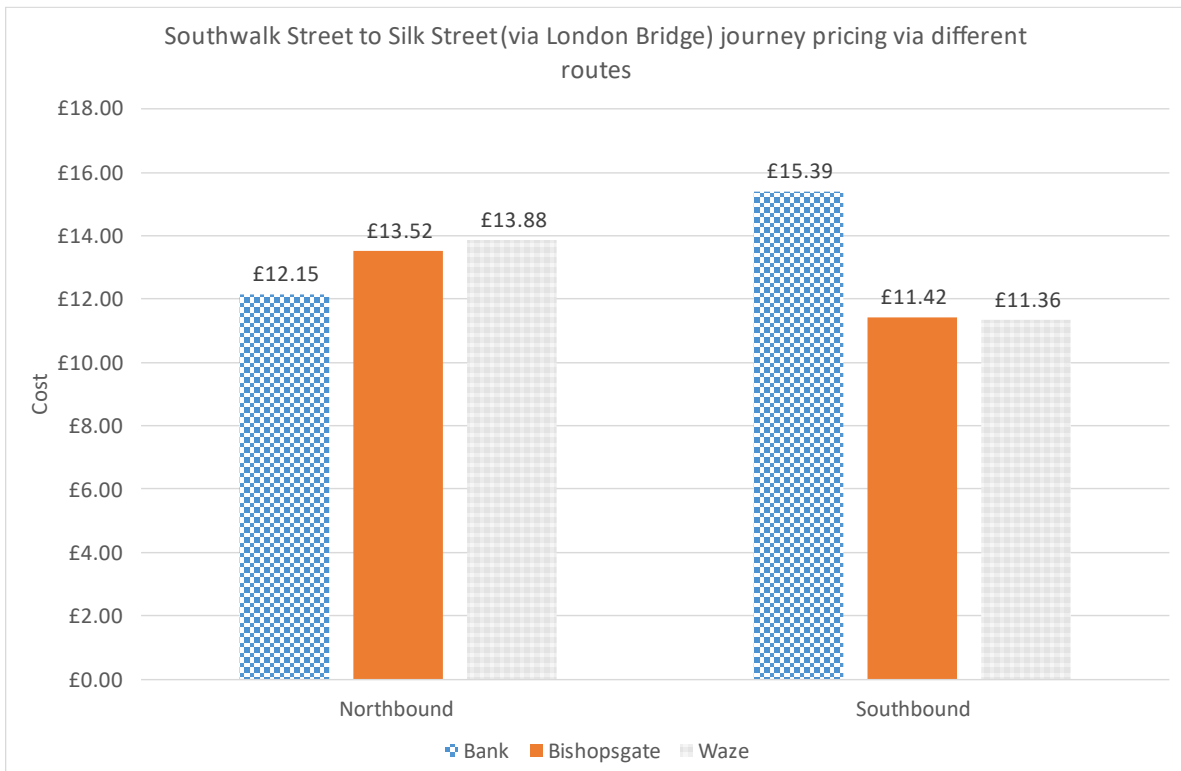
each other, showing that driving through Bank junction would not make a significant difference.

The cost of taxis via different routes ranged from approximately £12.00 to £14.00 Northbound, with the cheapest being via Bank at £12.15 and Waze the most expensive at £13.88. Southbound, Waze and Bishopsgate were both approximately £11.40, but Bank route cost £15.39 (Figure 3-29).

**Figure 3-28 - Southwark Street to Silk Street journey times**



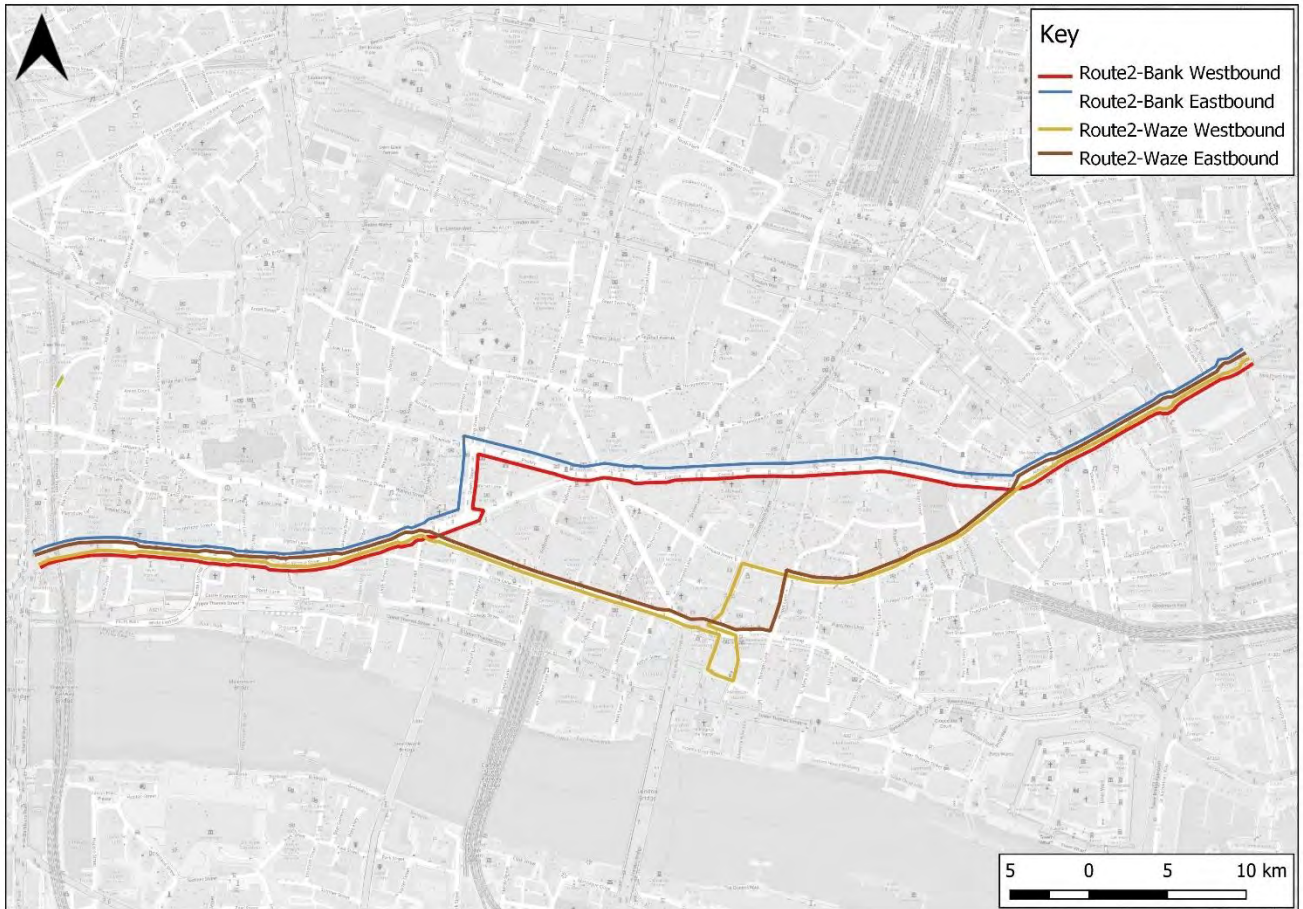
**Figure 3-29 - Southwark Street to Silk Street journey pricing via different routes**



'Origin-destination pair' two route was from Whitechapel High Street to Blackfriars Station.



**Figure 3-30 - Whitechapel High Street to Blackfriars Station**

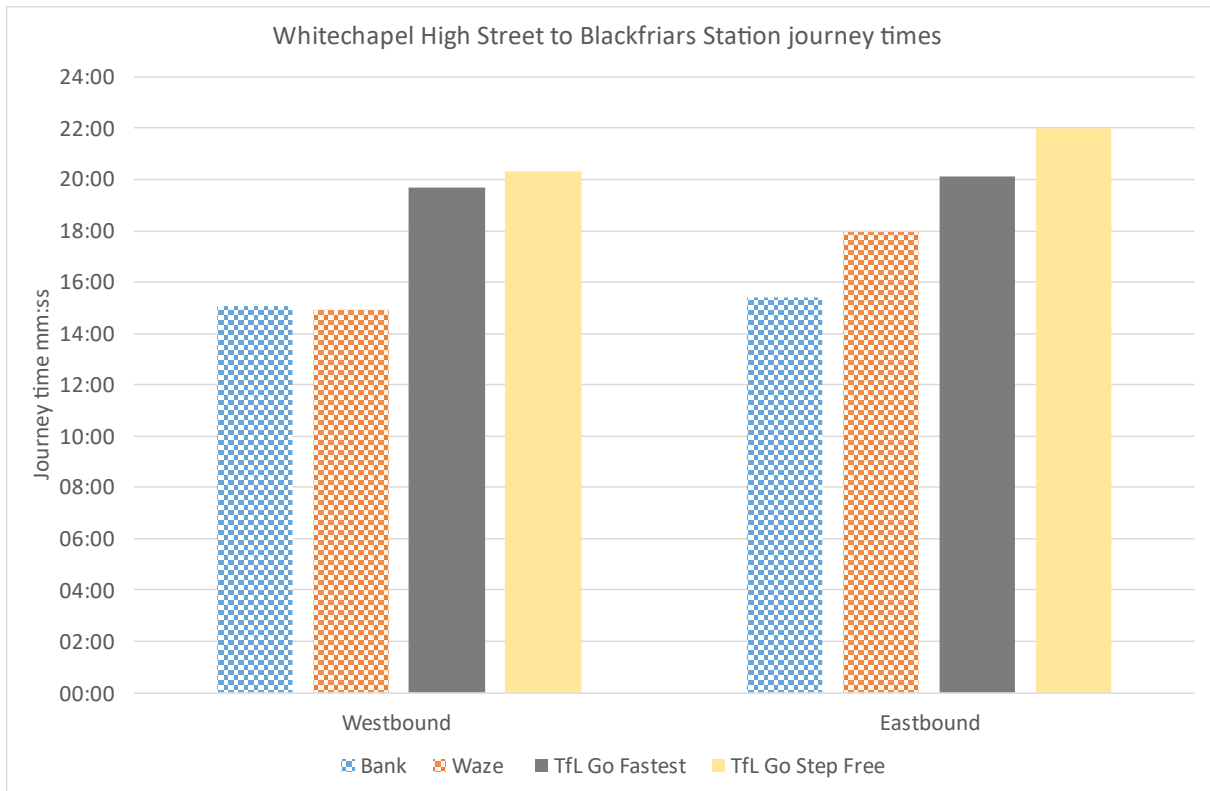


Overall, this journey had an average completion time of 15 minutes and 59 seconds. Travelling Westbound both route options took almost 15 minutes and travelling through Bank did not reduce the journey time. However, traveling Eastbound the route times varied with the route through Bank taking 15 minutes and 24 seconds and Waze taking almost 18 minutes (Figure 3-31).

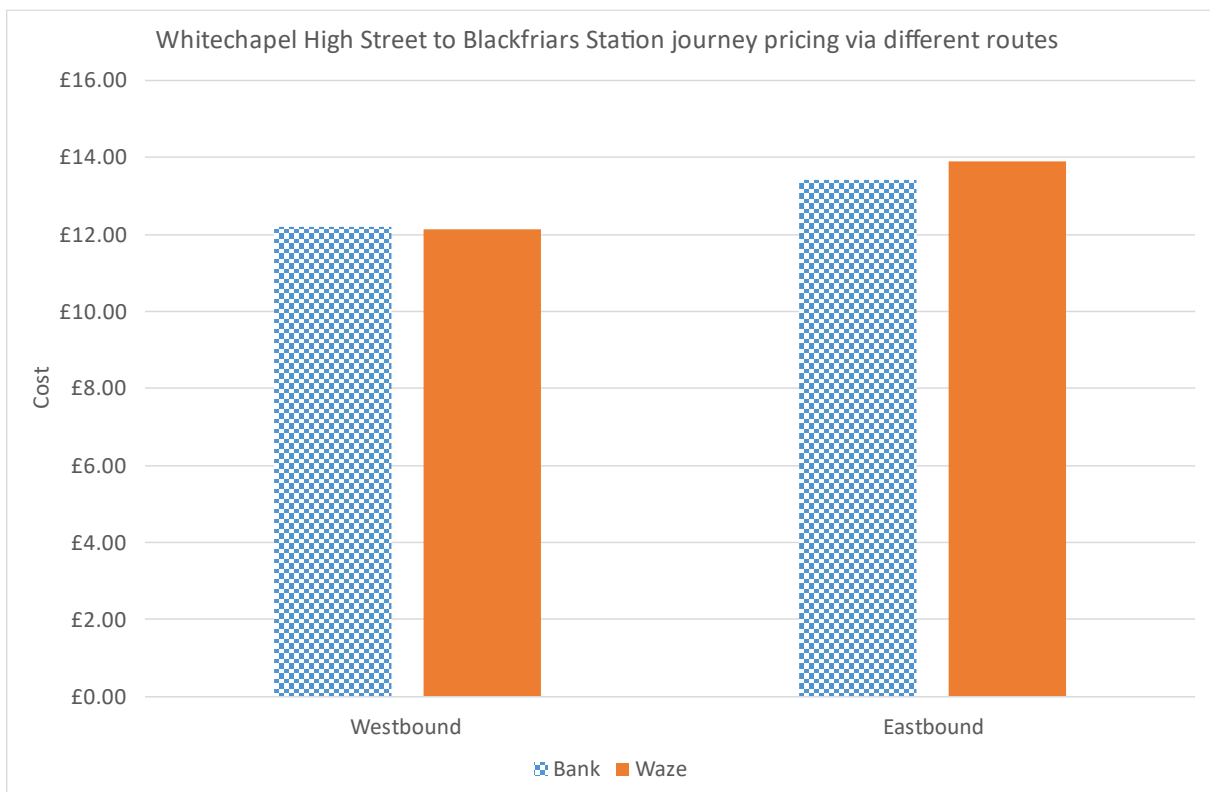
TfL Go routes in both Westbound and Northbound directions were estimated to take 20 minutes Westbound and 20 minutes Northbound (22 minutes for step free options). Driving routes took less time than public transport despite the restrictions at Bank and Bishopsgate restrictions.

Westbound taxi prices were both approximately £12.20, however Eastbound was slightly more expensive with Bank costing £13.42 and Waze £13.90 (Figure 3-32).

**Figure 3-31 - Whitechapel High Street to Blackfriars Station journey times**

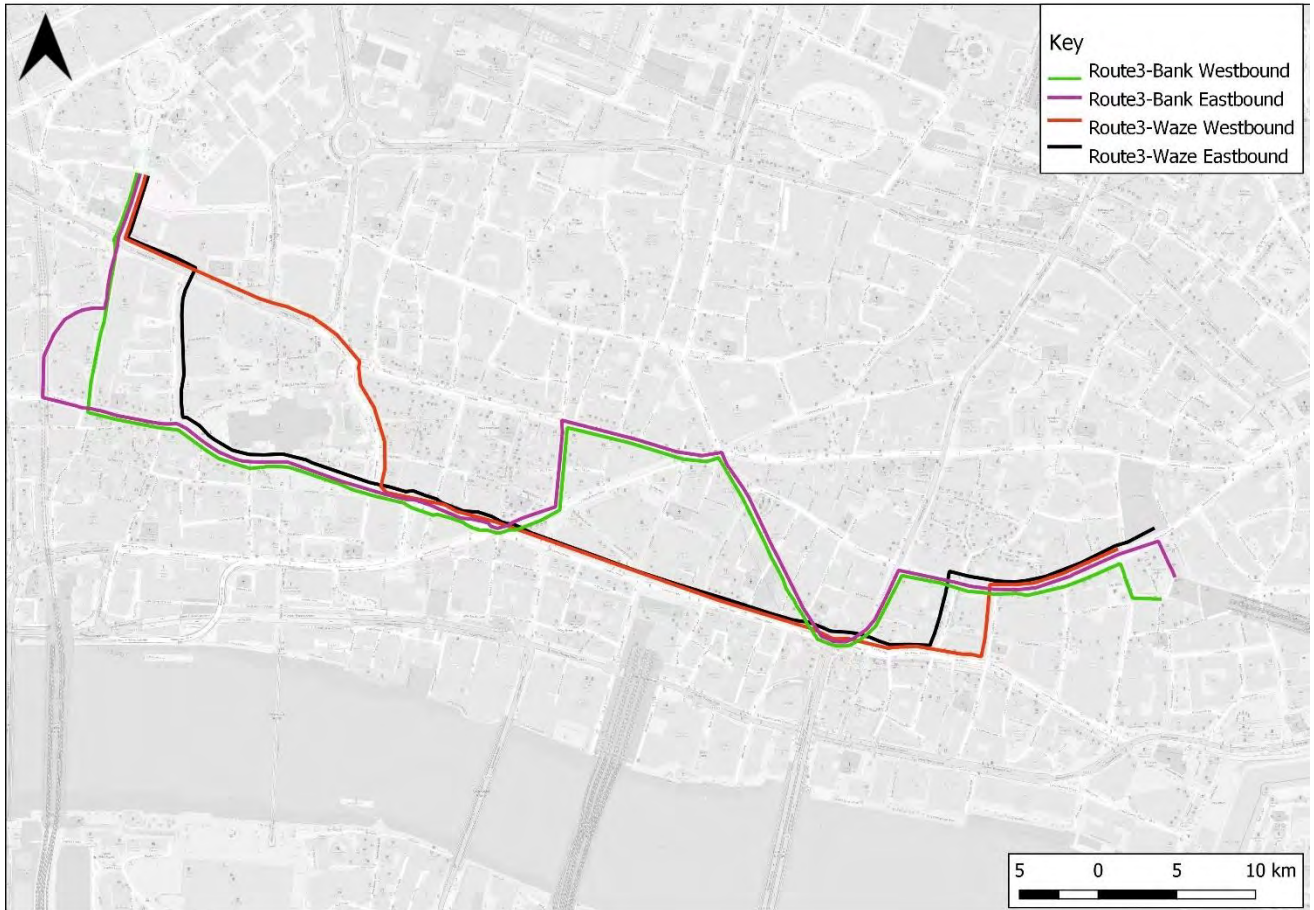


**Figure 3-32 - Whitechapel High Street to Blackfriars Station journey pricing via different routes**



'Origin-destination pair three between Fenchurch Street Station and Giltspur Street showed a longer journey time Eastbound than Westbound.

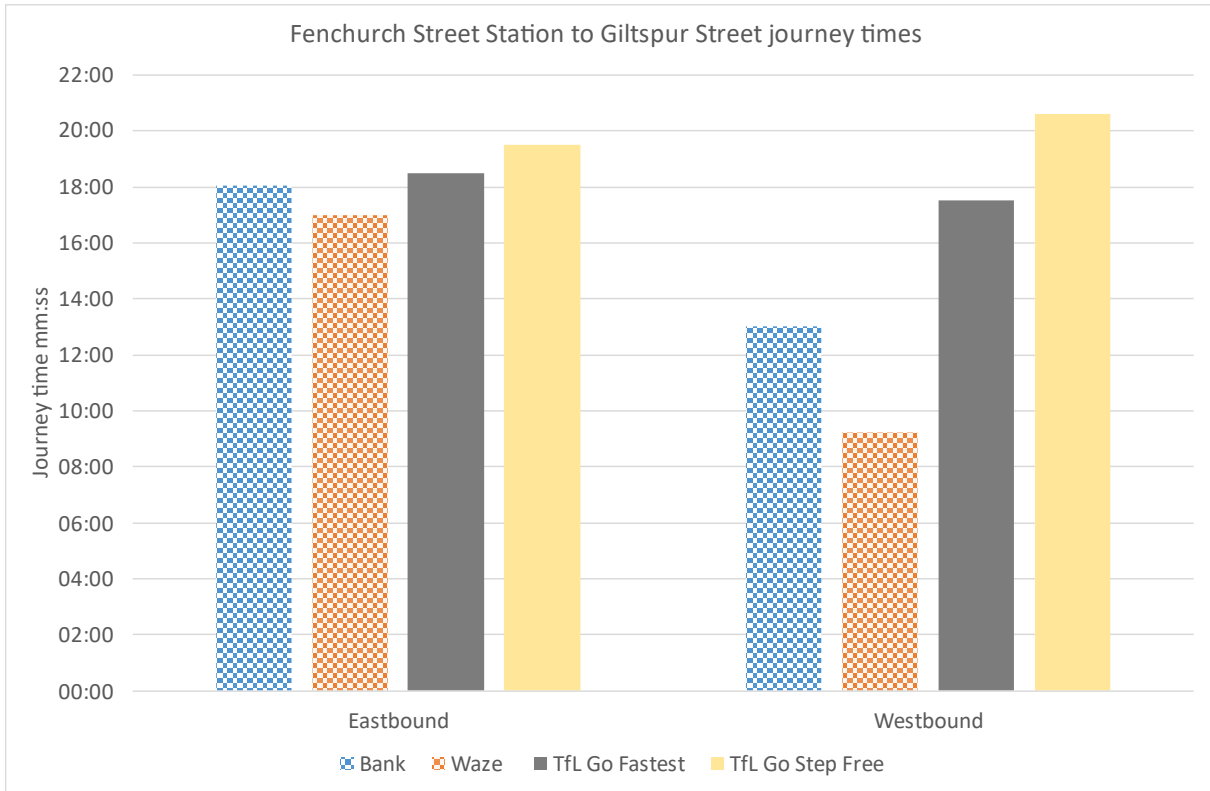
**Figure 3-33 - Fenchurch Street Station and Giltspur Street**



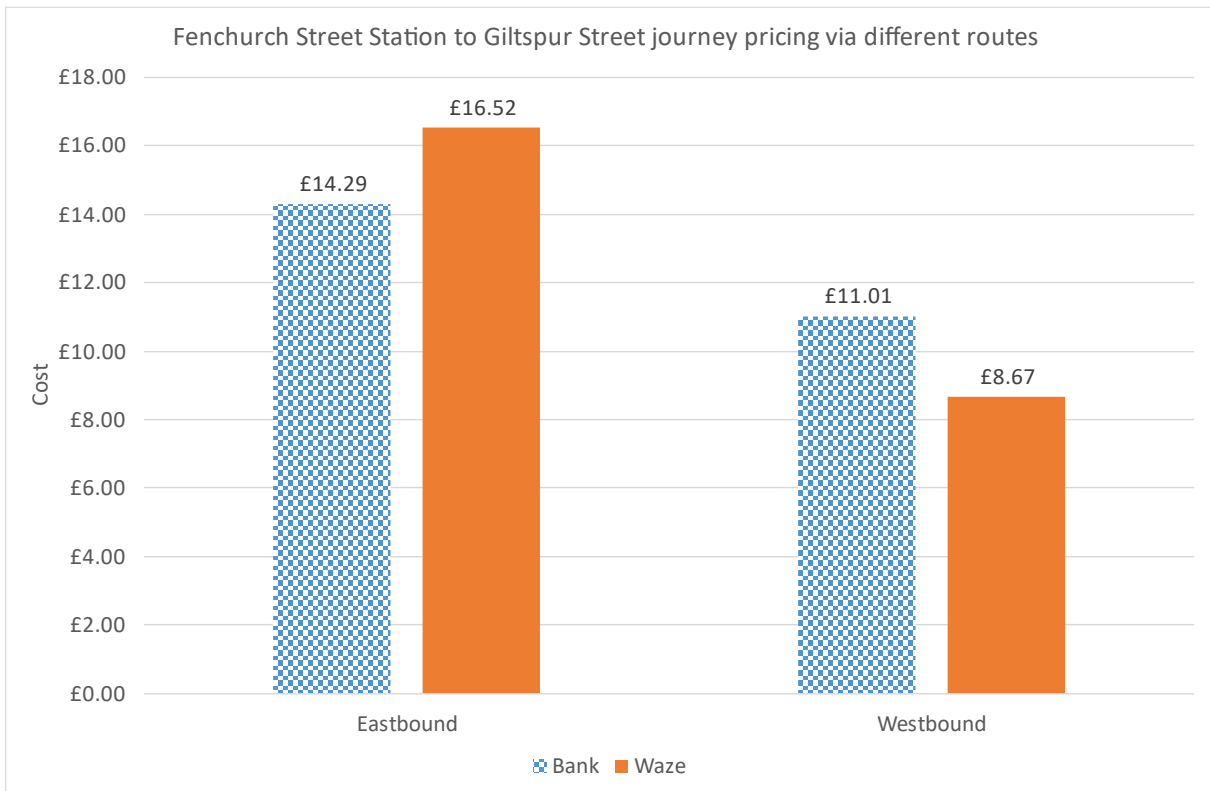
In both directions the route through Bank took longer than the route given by Waze indicating that opening up Bank junction would not result in a reduction in journey times for East to West journeys. Eastbound the route took approximately 18 minutes via Bank but 17 minutes via Waze. Westbound, it took 13 minutes via Bank but over 9 minutes via Waze. Despite this, the Bank route was cheaper Eastbound, costing around £14.30, while Waze route cost around £16.50. Westbound Bank route worked out as £11 while Waze route cost £8.67 on average.

The TfL go app showed a route that was marginally longer for the Eastbound route, at 18 minutes and 30 seconds for the fastest route, or 19 minutes 30 seconds for the step free route. The greatest time difference between a driving option and TfL option was only around 2 minutes and 30 seconds. Westbound showed 17 minutes 30 seconds as the fastest route, and over 20 minutes and 37 seconds for a step free route. This was over a 10-minute difference between a driving option and a TfL option.

**Figure 3-34 - Fenchurch Street Station to Giltspur Street**

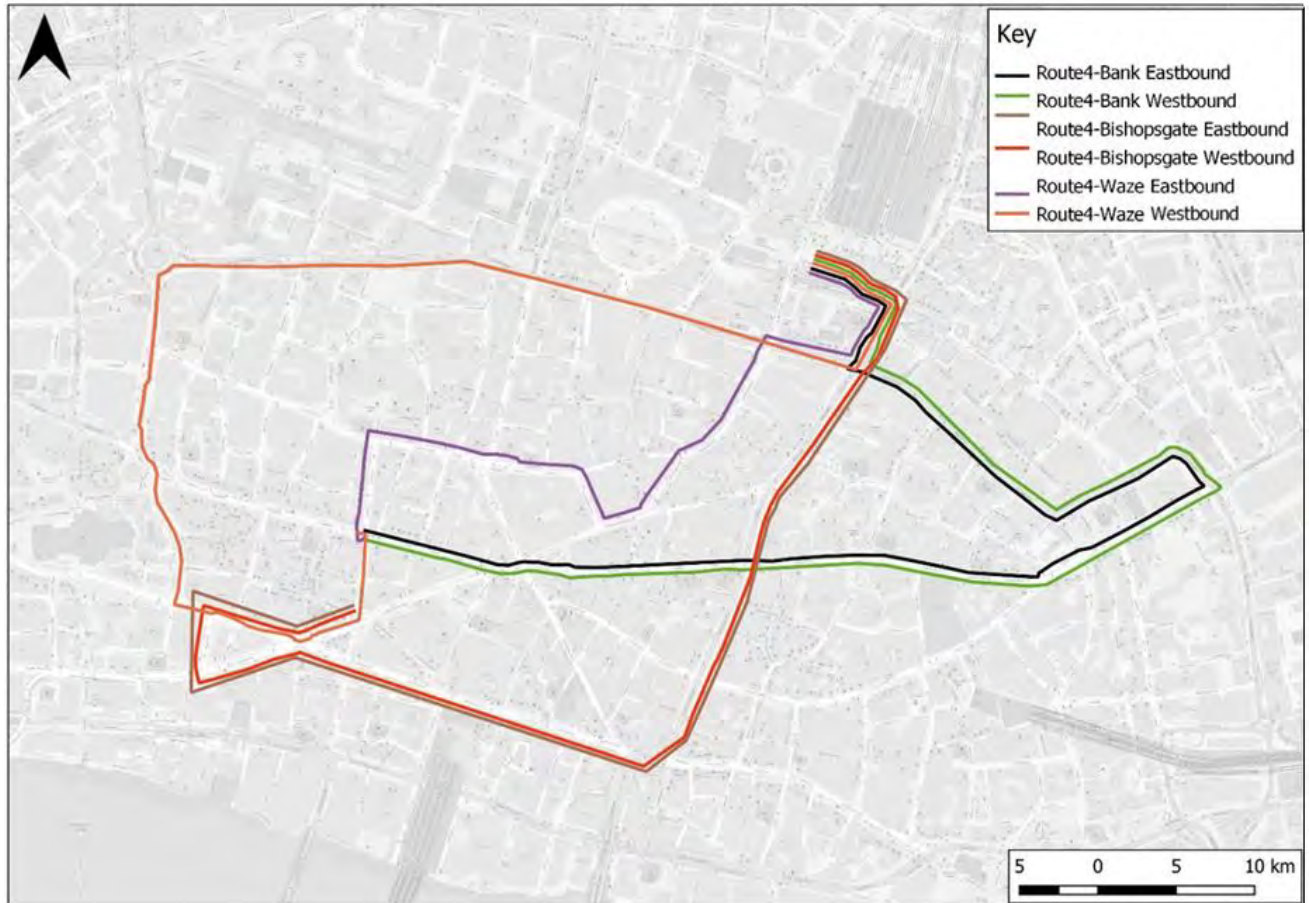


**Figure 3-35 - Fenchurch Street Station to Giltspur Street journey pricing via different routes**



'Origin-destination pair' four was between Liverpool Street to Queen Street. In both directions, the routing via Bank was the slowest and most expensive route option. As seen in Figure 3-36, this could be due to the need to divert via Aldgate to travel via Bank. This was not the most logical method of reaching the destination.

**Figure 3-36 - Liverpool Street to Queen Street**



The averaged journey for this route took around 12 minutes and 13 seconds. The route through Bank took around 14 minutes and 25 seconds in both directions. The Bishopsgate route and Waze route varied by direction. Bishopsgate took almost 11 minutes 40 seconds Westbound and 12 minutes 30 seconds Eastbound. The Waze route took 13 minutes Westbound but less than 9 minutes Eastbound (Figure 3-37). In both directions Waze was quicker than the Bank alternative, although this could have been down to the pre-selected routing of the Bank journey. This indicates that journeys for this general routing would not benefit from the reopening of Bank.

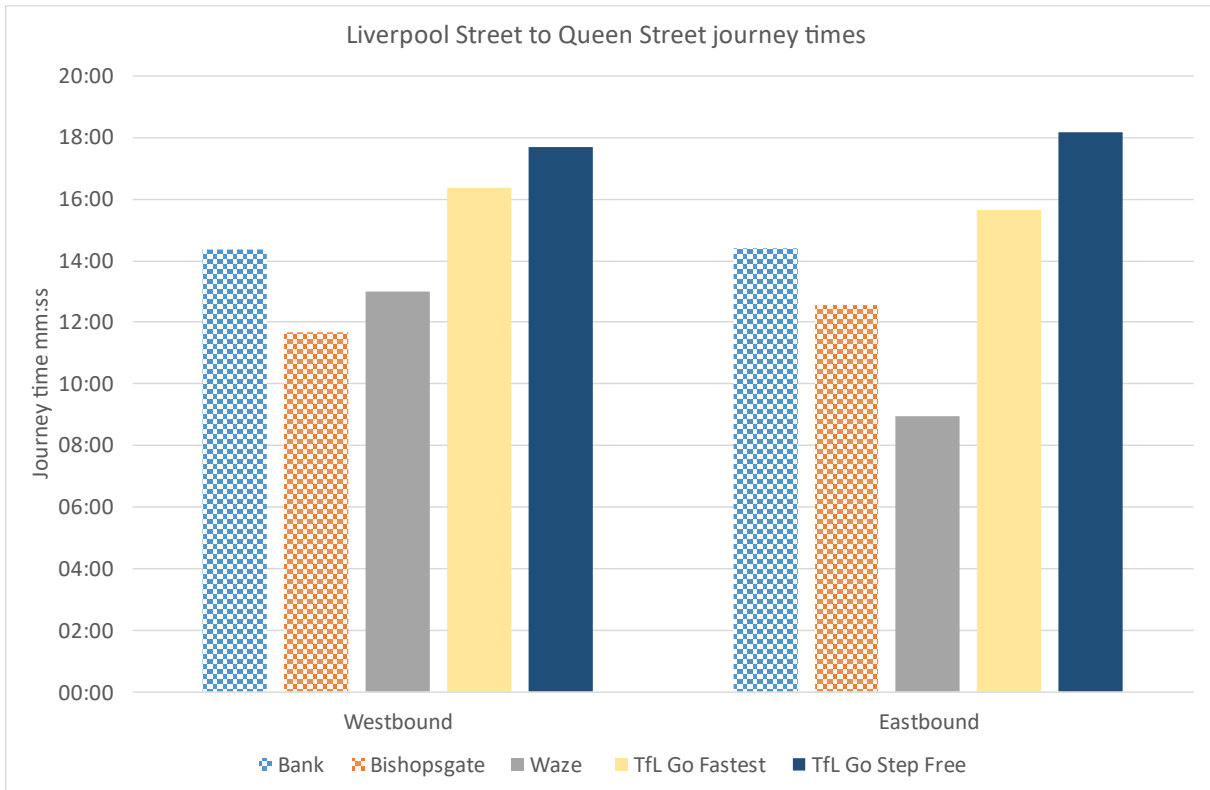
Similarly, to this, both directions through Bank cost approximately £11.85. Eastbound the Bishopsgate route cost £10.22 on average, but £11 on the Waze route. Westbound, the Bishopsgate route cost £10.75 and the Waze route was cheaper at £8.63 (Figure 3-38).

The TfL Go app was the slowest option compared to all driving journeys in both directions. The fastest route was 16 minutes 23 seconds on average, while a step free journey took

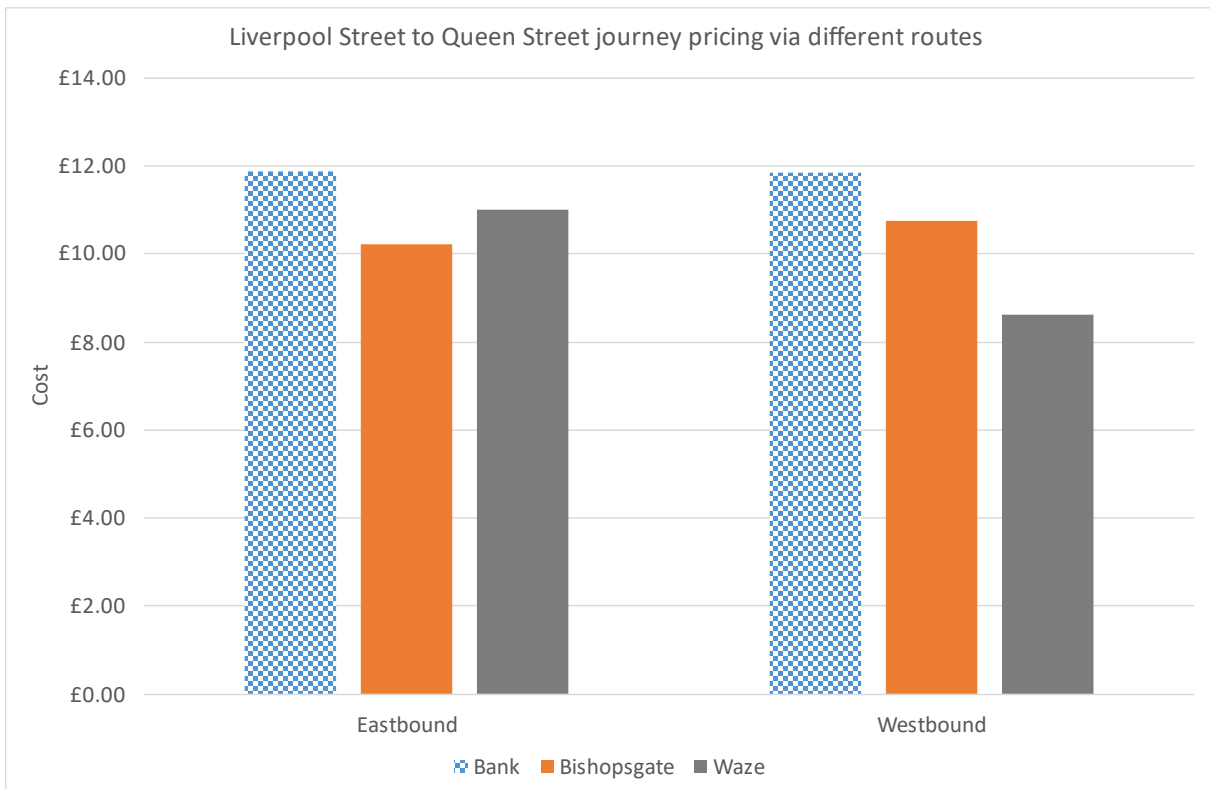


almost 18 minutes. Eastbound the quickest journey was over 15 minutes and 30 seconds, where as the step free access route was over 18 minutes.

**Figure 3-37 - Liverpool Street to Queen Street journey times**



**Figure 3-38 - Liverpool Street to Queen Street journey pricing via different routes**



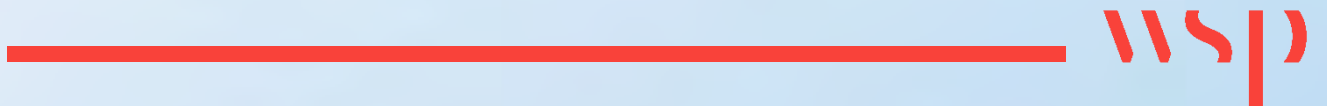


Overall, costs and journey times did not vary much across all four origin destinations pairs, suggesting the Bank restrictions have limited impacts to potential taxi times. Out of eight directional routes, Waze was fastest or of comparable journey time to routes that went through Bank despite adhering to restrictions and not using Bank junction or Bishopsgate. All but one journeys by taxi via any route were quicker than taking public transport. Bank was only the fastest route for Route 1 Northbound and Route 2 Eastbound.



# 3-

## OTHER DATA SOURCES



## 4 OTHER DATA SOURCES

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### 4.1 NUMBER OF TAXIS DETECTED BY THE CONGESTION CHARGE AND LOW EMISSIONS ZONE

The data provided in Appendix F shows the average number of licensed taxis detected during charging hours and on charging days for the years 2016 to 2023.

In 2016, the average number of licensed taxis detected during charging hours was 11,396. In 2017, there was a slight increase to 11,409 but from 2018 onwards, there is a clear declining trend:

- 2018: 9,796;
- 2019: 9,405; and
- 2021: 5,310.

There is a missing data point for the year 2020, due to the onset of COVID-19 and subsequent lockdowns. The declining trend continues in the subsequent years:

- 2022: 6,585; and
- 2023: 6,344.

The overall pattern shows a definite decrease in the average number of licensed taxis detected during charging hours and on charging days over the specified years. There might be various factors contributing to this decline, such as changes in transport trends, shifts in consumer or driver preferences to ride hailing apps, or changes in the taxi industry itself. Further analysis and contextual information would be necessary to provide a more detailed explanation for the observed pattern.

### 4.2 SHOWS TAXI AND PRIVATE HIRE LICENSING FIGURES

Appendix G shows taxi and private hire licensing figures by year from 2009/10 to January 2024.

#### Taxi

From 2009/10 to 2015/16, there is a general upward trend in the number of licenses:

- 2009/10: 21,334; and
- 2015/16: 21,500.

However, starting from 2016/17, there is a noticeable decline in the number of licenses:

- 2016/17: 21,274;
- 2017/18: 20,803;
- 2018/19: 20,301;
- 2019/20: 19,642;

- 2020/21: 18,341; and
- 2021/22: 17,361.

The most recent data point in January 2024 shows a further decrease to 15,795.

The overall pattern indicates a steady increase in the number of licenses until around 2015/16, followed by a consistent decline in the subsequent years. The reasons for this decline could be influenced by various factors such as changes in demand for taxi services, regulatory changes, economic conditions, or shifts in transport preferences.

It's also worth noting the significant drop in licenses from 2019/20 to 2020/21 and the continuing decline into January 2024, suggesting a potential acceleration in the rate of decline in recent years.

Whilst the number of licenses black cabs are decreasing, the number of PHV is increasing.

### **Private Hire Vehicle Patterns**

The number of private hire vehicle licenses for the years 2009/10 to January 2024 shows there is a general increasing trend from 2009/10 to 2014/15:

- 2009/10: 59,191; and
- 2014/15: 78,690.

The most significant increase occurs between 2014/15 and 2015/16, where the number of licenses jumps from 78,690 to 101,434. The trend continues to rise in the subsequent years.

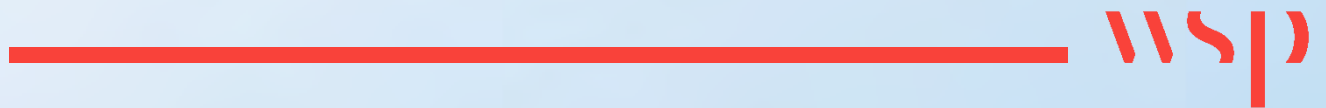
Between 2019/20 to 2020/21 there is a decrease in the number of licenses from 111,766 to 105,329. The decline in licenses continues in 2021/22, and the most recent data point in January 2024 shows a further decrease:

- 2021/22: 99,937; and
- Jan 2024: 106,431.

Overall, the data reflects a period of growth in private hire vehicle licenses until around 2019/20, followed by a decline in the subsequent years. The subsequent decline may be influenced by factors such as changing work patterns, economic conditions, or shifts in consumer preferences. To gain a deeper understanding of the patterns observed, additional context and information about the local transport industry and policy decisions during this period would be helpful.

# Appendix A

TAXI RANK NUMBER, LOCATION  
AND COMMENTS





Site Number	Taxi Rank Number	Location	Comments
1	01-TR	Lindsey Street (east of Smithfield Market)	No Issues To Report
2	02-TR	Silk Street (adj Linklaters)	No Issues To Report
3	03-TR	Sun Street	Taxi Rank Not Surveyed Due To Roadworks From Building Site
4	04-TR	Appold Street	No Issues To Report
5	5&6-TR	Liverpool Street (East)	No Issues To Report
6	07-TR	Devonshire Square	No Issues To Report
7	08-TR	St Mary Axe	No Issues To Report
8	09-TR	Leadenhall Street	Taxi Rank Closed Off From 08:09 Until End of Survey
9	10-TR	Philpot Lane	No Issues To Report
10	11-TR	Mincing Lane	No Issues To Report
11	14-TR	Fenchurch Place /Fenchurch St	No Issues To Report
12	13-TR	Fenchurch Place /St Katherines Row	No Issues To Report
13	15-TR	Coopers Row	No Issues To Report
14 -	16-TR	Minories	No Issues To Report
15	17-TR	Lower Thames Street	No Issues To Report
16	18-TR	Cornhill	No Issues To Report
17	19-TR	Queen Victoria Street	Taxi Rank Not Surveyed As Road Was Closed
18	20-TR	Queen Victoria Street (Bloomberg)	No Issues To Report
19	21-TR	Princes Street	No Issues To Report
20	22-TR	Gresham Street (west junc with Old Jewry)	Approximately Half of Taxi Rank Closed Off By Cones With Digger Parked In Taxi Rank
21	23-TR	Gresham Street (west Milk Street)	No Issues To Report



Site Number	Taxi Rank Number	Location	Comments
22	24-TR	Cheapside ( One New Change)	No Issues To Report
23	25-TR	St. Paul's Churchyard	No Issues To Report
24	26-TR	Queen Victoria Street (Church of Scientology)	No Issues To Report
25	27-TR	Queen Victoria Street (Blackfriars Station)	No Issues To Report
26	28-TR	John Carpenter Street	Taxi Rank Surveyed From 00:00 -10:22 Only Due To Camera Malfunction
27	29-TR	Tudor Street	No Issues To Report
28	30-TR	Limeburner Lane	No Issues To Report
29	31-TR	Farringdon Street (opp Goldman Sachs)	No Issues To Report
30	32-TR	St Bride Street	Taxi Rank Not Surveyed As Road Was Closed
31	33-TR	Little New Street	No Issues To Report
32	34-TR	Farringdon Street (Old Fleet Lane)	No Issues To Report
33	35-TR	Wood Street	No Issues To Report
34	36-TR	Crosswall	No Issues To Report

# Appendix B

TAXI RANK OPERATIONAL HOURS





### City of London taxi ranks

Taxi ranks in the City of London are shown below. These are normally appointed by the city of London Police and are correct as of October 2022.

Location	Spaces	Times of operation
Appold Street	6	24 hours
Cheapside	3	24 hours
Cooper Row	2	24 hours
Cornhill	4	24 hours
Crosswall	2	24 hours
Devonshire Square	2	24 hours
Farringdon Street	2	10:00 – 16:00 & 19:00 – 00:00
Farringdon Street	3	24 hours
Farringdon Street	3	24 hours
Giltspur Street	2	24 hours -
Gresham Street (North side)	2	24 hours
Gresham Street (South side)	2	19:00 – 07:00



Location	Spaces	Times of operation
John Carpenter Street	2	24 hours
Leadenhall Street	2	19:00 – 07:00
Limeburner Lane	3	19:00 – 07:00
Lindsay Street (Farringdon Est)	3	24 hours
Little New Street	3	24 hours
Liverpool Street	14	24 hours
Lower Thames Street	9	24 hours
Mincing Lane	4	10:00 – 06:00
Minories	3	24 hours
Muscovy Street	2	24 hours
New Change	2	19:00 – 07:00
Pepys Street	2	24 hours on hotel forecourt
Philpot Lane	4	24 hours
Princes Street	3	07:00 – 19:00
Queen Victoria Street	2	07:00 – 19:00

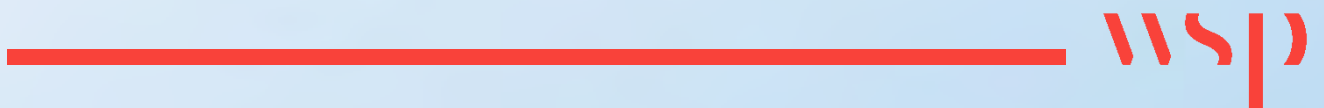


<b>Location</b>	<b>Spaces</b>	<b>Times of operation</b>
Queen Victoria Street	5	21:00 – 02:00
Queen Victoria Street (City Corporation rest bay)	3	24 hours
Queen Victoria Street	7	24 hours
Queen Victoria Street	4	24 hours
Silk Street	2	24 hours
St Mary Axe	2	24 hours
St Bride Street	8	24 hours
St Paul's Churchyard	2	24 hours
Sun Street	4	24 hours
Tudor Street	3	24 hours
Wood Street	2	24 hours

Source: [TfL appointed taxi ranks - 14 Oct 2022](#) V13 Correct as of 14/10/2022.

# Appendix C

RIDE HAILING APP DATA  
COLLECTION DATES





**17th October:**

1. Cheapside.
2. Moorgate.
6. Gresham Street.
7. Gracechurch Street/Fenchurch Street.

**18th October: On this day, a high security event took place at Mansion House**

12. King William Street.
13. Cornhill.
14. Threadneedle Street.
15. Princes Street.
16. Poultry.
17. Queen Victoria Street.

**19th October:**

3. Bishopsgate.
4. Holborn viaduct.
5. Aldersgate Street.
8. Fleet Street.
9. Farringdon Street/New Bridge Street.
10. Beech Street/Silk Street.
11. London Wall – Wood Street.
18. Leadenhall (East of St Mary Axe).
19. Minories.
20. Chancery Lane.

# Appendix D

JOURNEY TIME COLLECTION DATA





## Journey Time

Southwark Street to Silk Street (via London Bridge)							
Northbound	Run 1	Run 2	Run 3	Run 4	Run 5		
Waze	20:58	18:38	21:41				
Bank	15:30	15:21	12:53	17:52	12:54		
Bishopsgate	17:06	19:11	19:40	14:41	15:29		
Southbound	Run 1	Run 2	Run 3	Run 4	Run 5		
Waze	0:15:59	0:12:56	0:14:02	0:11:25			
Bank	19:45	13:27	18:40	13:13	17:22		
Bishopsgate	09:56	12:29	14:31	17:19	15:03		
Whitechapel High Street to Blackfriars Station							
Westbound	Run 1	Run 2	Run 3	Run 4			
Bank	15:19	14:47					
Waze	17:43	15:24	15:45	10:53			
Eastbound	Run 1	Run 2	Run 3	Run 4			
Bank	16:32	16:12	13:28				
Waze	18:51	13:46	20:29	18:39			
Fenchurch Street Station to Giltspur Street							
Eastbound	Run 1	Run 2	Run 3	Run 4			
Bank	21:02	11:18	20:36	19:15			
Waze	14:32	15:37	14:09	23:34			
Westbound	Run 1	Run 2	Run 3	Run 4			
Bank	13:36	12:03	12:26	13:59			
Waze	09:24	09:55	07:02	10:31			



Liverpool Street to Queen Street							
Westbound	Run 1	Run 2	Run 3	Run 4	Run 5		
Bishopsgate	09:06	12:55	12:26	12:11			
Bank	12:11	14:34	17:42	13:04			
Waze	10:58	16:06	13:12	13:49	10:56		
Eastbound	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Run 7
Bishopsgate	11:36	13:03	08:25	13:56	15:46		
Bank	12:30	19:52	13:18	13:27	12:58		
Waze	10:08	06:52	08:30	07:46	13:12	08:32	07:30



## TFL GO FASTEST

Run	Route 1		Route 2		Route 3		Route 4	
	Northbound	Southbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound
1	00:16:00	00:17:00	00:18:00	00:21:00	00:18:00	00:22:00	00:16:00	00:14:00
2	00:18:00	00:17:00	00:21:00	00:23:00	00:18:00	00:17:00	00:16:00	00:14:00
3	00:17:00	00:17:00	00:18:00	00:19:00	00:17:00	00:19:00	00:19:00	00:14:00
4	00:16:00	00:17:00	00:19:00	00:19:00	00:18:00	00:18:00	00:17:00	00:14:00
5	00:16:00	00:17:00	00:20:00	00:19:00	00:18:00	00:18:00	00:14:00	00:14:00
6	00:19:00	00:17:00	00:22:00	00:21:00	00:15:00	00:18:00	00:17:00	00:14:00
7	00:17:00	00:16:00		00:19:00	00:18:00	00:18:00	00:17:00	00:14:00
8	00:17:00	00:17:00			00:18:00	00:18:00	00:14:00	00:14:00
9	00:17:00	00:17:00					00:14:00	00:14:00
10	00:17:00	00:17:00					00:18:00	00:24:00
11	00:12:00	00:17:00					00:17:00	00:16:00
12	00:10:00	00:17:00					00:17:00	00:18:00
13	00:18:00	00:17:00					00:17:00	00:16:00
14		00:17:00						00:18:00





Run	Route 1		Route 2		Route 3		Route 4	
	Northbound	Southbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound
								00:17:00
								00:14:00
								00:17:00

### TFL GO STEP FREE

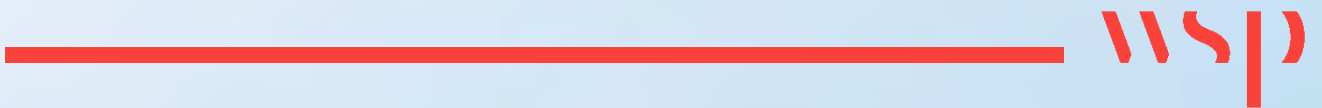
Run	Route 1		Route 2		Route 3		Route 4	
	Northbound	Southbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound
1	00:16:00	00:17:00	00:18:00	00:23:00	00:24:00	00:24:00	00:16:00	00:14:00
2	00:18:00	00:17:00	00:21:00	00:23:00	00:18:00	00:17:00	00:16:00	00:22:00
3	00:17:00	00:17:00	00:21:00	00:22:00	00:19:00	00:19:00	00:19:00	00:20:00
4	00:16:00	00:17:00	00:20:00	00:22:00	00:21:00	00:18:00	00:17:00	00:22:00
5	00:16:00	00:17:00	00:20:00	00:22:00	00:22:00	00:24:00	00:14:00	00:14:00
6	00:19:00	00:17:00	00:22:00	00:23:00	00:15:00	00:18:00	00:17:00	00:22:00
7	00:17:00	00:16:00		00:19:00	00:23:00	00:18:00	00:17:00	00:14:00
8	00:17:00	00:17:00			00:23:00	00:18:00	00:14:00	00:14:00
9	00:17:00	00:17:00					00:14:00	00:22:00



Run	Route 1		Route 2		Route 3		Route 4	
	Northbound	Southbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound
10	00:17:00	-					00:18:00	00:25:00
11	00:12:00	-					00:17:00	00:16:00
12	00:10:00	00:17:00					00:22:00	00:18:00
13	00:18:00	00:17:00					00:17:00	00:20:00
14		00:17:00						00:20:00
								00:17:00
								00:14:00
								00:15:00

# Appendix E

EXCLUDED RIDE HAILING APP DATA





Five apps were initially chosen to record ride hailing wait times. These were Gett, Uber, Bolt, Free Now and Addison Lee.

### **Taxi**

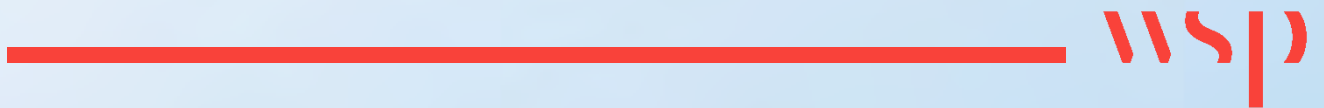
Data from Free now, Addison lee, Bolt has been used for the analysis of taxi waiting times. Gett app data was excluded because of a potential lack of data accuracy and Uber does not have Taxi/Black Cabs on the app yet.

### **Private Hire Vehicles**

Data from Free Now, Uber and Bolt has been used for the analysis of PHV waiting times. Addison Lee data has been omitted from PHV data, as it exhibits no similarities with other app recordings and Gett does not include PHV on their app.

# Appendix F

CONGESTION CHARGE AND LOW  
EMISSIONS ZONE





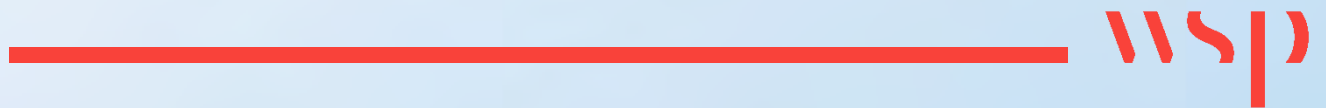
### Congestion Charge and Low Emissions Zone factsheets

Date	from	to	Average number of Licensed Taxis detected (during charging hours and on charging days)
	01-Apr	30-Jun	
Q1	2016		11396
Q1	2017		11409
Q1	2018		9796
Q1	2019		9405
Q1	2021		5310
Q1	2022		6585
Q1	2023		6344
Q1	2020		n/a

Source: [Congestion Charge - Transport for London \(tfl.gov.uk\)](https://tfl.gov.uk)

# Appendix G

TAXI AND PRIVATE HIRE LICENSING  
FIGURES BY YEAR





<b>Taxis</b>				
<b>Year</b>	<b>Vehicles</b>	<b>Drivers: All London</b>	<b>Drivers: Suburban</b>	<b>Drivers: Total</b>
09/10	22,445	21,334	3,580	24,914
10/11	22,558	21,499	3,571	25,070
11/12	23,099	21,690	3,646	25,336
12/13	22,168	21,733	3,727	25,460
13/14	22,810	21,876	3,662	25,538
14/15	22,500	21,724	3,508	25,232
15/16	21,759	21,500	3,370	24,870
16/17	21,300	21,274	3,213	24,487
17/18	21,026	20,803	3,023	23,826
18/19	20,136	20,301	2,858	23,159
19/20	18,504	19,642	2,695	22,337
20/21	13,461	18,341	2,445	20,786
21/22	14,695	17,361	2,184	19,486
7 January 2024	14,756	15,795	1,854	17,645

<b>Private Hire</b>			
<b>Year</b>	<b>Operators</b>	<b>Drivers</b>	<b>Vehicles</b>
09/10	2,882	59,191	49,355
10/11	3,111	61,200	50,663
11/12	3,164	64,063	53,960
12/13	3,159	66,975	49,854
13/14	3,038	65,656	52,811
14/15	3,006	78,690	62,724
15/16	2,814	101,434	78,139
16/17	2,430	117,712	87,409





<b>Private Hire</b>			
<b>Year</b>	<b>Operators</b>	<b>Drivers</b>	<b>Vehicles</b>
17/18	2,373	113,645	87,921
18/19	2,206	106,777	88,113
19/20	2,113	111,766	94,712
20/21	1,955	105,329	77,726
21/22	1,710	99,937	80,857
7 January 2024	1,717	106,431	91,965

Source TfL: [Licensing information - Transport for London \(tfl.gov.uk\)](https://tfl.gov.uk).



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