



## Monitoring: Harmood Street Safe & Healthy Streets Scheme

The COVID-19 pandemic has changed how communities live, travel and work.

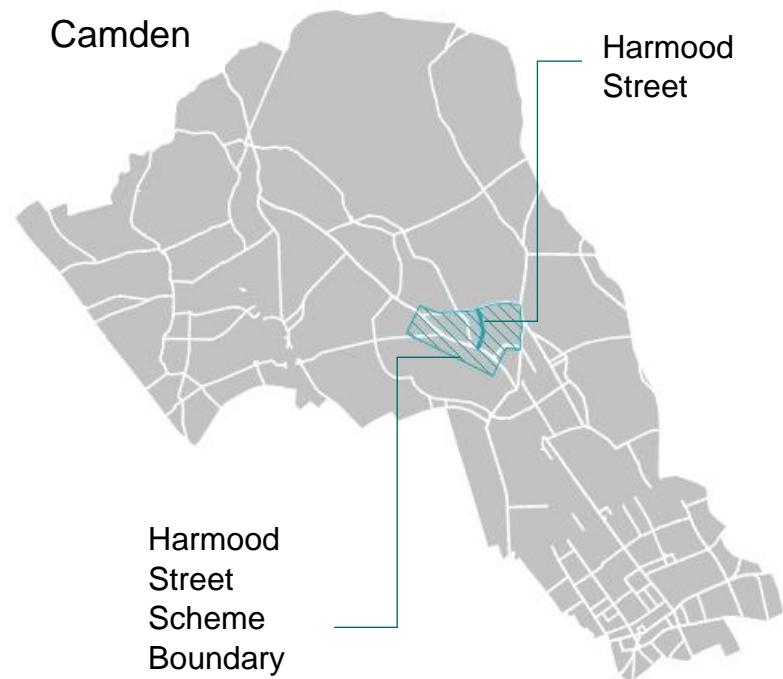
Harmood Street is used as a route by many motor vehicles seeking to cut through between Prince of Wales Road and Haverstock Hill. This makes Harmood Street a busy and less safe street for residents. Harmood Street also has a history of road safety concerns with a number of collisions occurring between motor vehicles and pedestrians and cyclists.

As part of our Harmood Street Public Realm Project, several changes have been made to Harmood Street to reduce motor vehicle flow and support safer walking and cycling, which includes the following:

- The addition of an ANPR (Automatic Number Plate Recognition) camera enforced motor vehicle restriction south of the junction of Harmood Street with Clarence Way to prevent motor vehicles from proceeding, in either directions, through the restriction along Harmood Street
- The addition of 'No Motor Vehicle' signs and planters on the road and bollards on the pavement to enforce the restriction
- The relocation of 4 resident parking spaces on Harmood Street, east of the restriction, on the western side of the street, opposite the junction of Harmood Street with Clarence Way. The space currently allocated to parking on the eastern side will be converted to double yellow lines

The scheme was implemented under an Experimental Traffic Order (ETO) which came into force on 28 January 2021.

To review the impact of the Harmood Street Scheme 12 months after the ETO was implemented, data on motor vehicles, pedal cycles, road safety (collision data) and air quality was collected before and after scheme implementation. The data has been compared and summarised in this monitoring report. This information is useful in guiding decisions on whether the trial scheme should be made permanent, modified, or removed at the expiry of the ETO.










## Summary

This document sets out data and other information gathered during the trial period of the Harmond Street Scheme. It has been gathered and analysed to help monitor the impact of the scheme.

A review of 'Before' and 'After' scheme data for the Harmond Street Scheme indicates the following:

-  Motor vehicle levels on Harmond Street (traffic count 2 and 3) were **80% lower** and **79% lower** respectively in July 2021 ('After-scheme') compared to 'Before-scheme' data from March 2019. Average traffic flow on 'local roads' has **reduced** by **47%** across the scheme boundary.
-  Where 'Before-scheme' and 'After-scheme' data was available, average daily **cycling flows** were **higher** in July 2021 ('After-scheme') compared to December 2020 ('Before-scheme').
-  A **139% increase** in Lime dockless bike hire bicycle usage was observed when comparing the number of trips within the Harmond Street Scheme area between February 2020 – March 2020 ('Before-scheme') and February 2021 – March 2021 ('After-scheme').
-  Collision data in the Harmond Street scheme boundary 'Before-scheme' (1 January 2018 – 27 January 2021) showed a total of 99 collisions involving casualties were recorded, 31 of which involved cyclists. 'After-scheme' (28 January 2021 – 30 June 2021) 12 collisions involving casualties were recorded, 2 of which involved cyclists.
-  NO<sub>2</sub> levels have **decreased** at 2 monitoring sites in the Harmond Street scheme boundary when comparing Feb-Jul 2019 ('Before-scheme') with Feb-Jul 2021 ('After-scheme').

In summary, the latest monitoring data gathered indicates higher cycling levels within the Harmond Street Scheme boundary following the completion of the scheme compared to the 'Before-scheme' data. Motor vehicle levels were lower or commensurate 'After-scheme' on the majority of roads reviewed in the scheme area. No specific impact on air quality or road safety has been identified at this stage based on the data available.



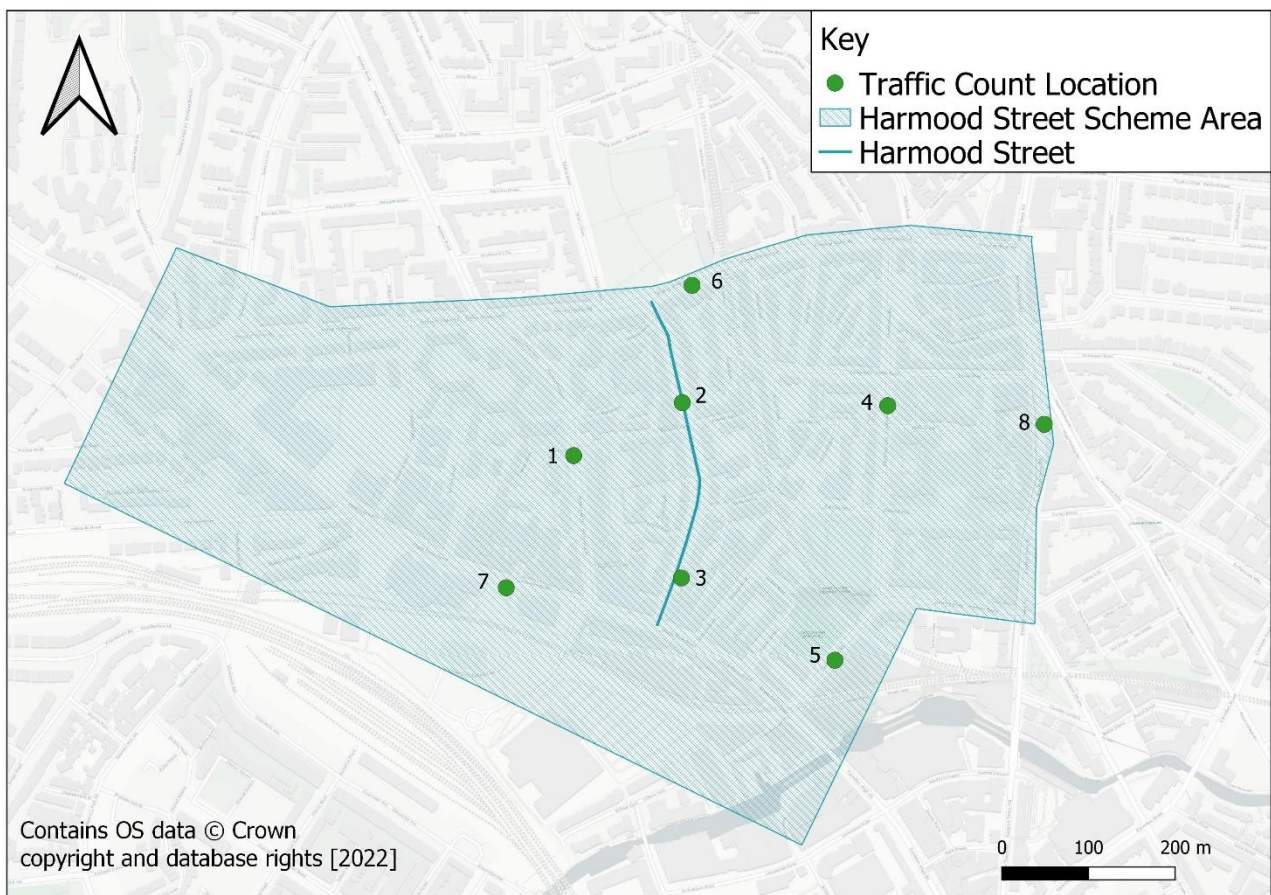
## Motor Vehicle Data

### Traffic Counts

24-hour traffic flows were analysed for each vehicle class, including cycles, motorcycles, cars, Light Goods Vehicles (LGVs) and Heavy Duty Vehicles (HDVs<sup>1</sup>) through both automatic traffic counts and 'Vivacity' sensors. The results presented below show the average daily two-way traffic flows for eight locations within the Harmond Street scheme boundary. Cycle data is reviewed in the next section. See Appendix A and Appendix B for further details on the method and data used.

The map below presents the locations of the traffic counts surveyed within the scheme boundary.

### Harmond Street Scheme Area and Traffic Count Sites



'Before-scheme' data for 3 locations has been collected for a two-week period in March 2019. Data for a further 3 locations has been collected for a two-week period (05/12/2020 – 18/12/2020). Data for traffic count 4 has been collected for a two-week period in

<sup>1</sup> Heavy Duty Vehicles include Heavy Goods Vehicles and Buses.





November 2017 (05/11//2017 – 18/11/2017). The results presented represent an average 24-hour day and represent traffic flows prior to the ETO being implemented on 28/01/2021.

'After-scheme' data (i.e. after the scheme was constructed) has been collected over a two-week period in July 2021, prior to the school summer holiday period.

### Average Daily Motor Vehicle Flows

| Traffic Count | Road                 | Between                | Before | After  | % Change |
|---------------|----------------------|------------------------|--------|--------|----------|
| 1             | Malden Crescent      | North of Mead Close    | 3,814  | 3,422  | -10%     |
| 2             | Harmood Street       | North of Powlett Place | 2,479  | 496    | -80%     |
| 3             | Harmood Street       | South of Collard Place | 2,025  | 425    | -79%     |
| 4             | Castlehaven Road     | North of Lewis Street  | 5,188  | 2,761  | -47%     |
| 5*            | Castlehaven Road     | South of Hawley Road   | 7,387  |        |          |
| 6             | Prince of Wales Road | West of Ryland Road    | 11,202 | 11,348 | 1%       |
| 7             | Chalk Farm Road      | South of Castle Road   | 9,115  | 11,231 | 23%      |
| 8**           | Kentish Town Road    | North of Hartland Road |        | 18,907 |          |

\*After-scheme data is unavailable for Castlehaven Road (Site 5). \*\*Before-scheme data is unavailable on Kentish Town Road.

The data suggests the scheme has had a positive impact on traffic flows in the local area, specifically on Harmood Street where an 80% and 79% decrease has been observed at traffic count 2 and 3. Malden Crescent and Castlehaven Road (traffic count 4) have also experienced a decrease in traffic flows. A 23% increase in average traffic flows has been observed on Chalk Farm Road as cars alternatively use this road due to the restriction on Harmood Street. Traffic flows on Prince of Wales Road (traffic count 6) have increased by 1%. A 'Before-scheme' and 'After-scheme' comparison cannot be made on Kentish Town Road due to the unavailability of 'Before-scheme' data, whilst a comparison cannot be made on Castlehaven Road (traffic count 5) due to the unavailability of 'After-scheme' data.

### Local Streets and Main Roads

A review of traffic trends by 'local streets' and 'main roads' has been completed for the scheme. A count point for each road within the scheme area has been selected and categorised. The 'main roads' category comprises count sites 6 and 7, and the 'local streets' category comprises count sites 1, 2, 3 and 4. Sites 5 and 8 have not been included due to unavailable 'Before-scheme' or 'After-scheme' data.



### Harmood Street Scheme Area Roads Daily Average Motor Vehicle Flow (7-Day)

| Road        | Before | After  | % Change |
|-------------|--------|--------|----------|
| Local Roads | 13,506 | 7,104  | -47%     |
| Main Roads  | 20,317 | 22,579 | 11%      |
| Total       | 33,822 | 29,682 | -12%     |

The results for 'local roads' and 'main roads' are presented in the table above and indicate that following the scheme's implementation, 'local roads' within the scheme boundary have seen a decrease in traffic flows (47%) whilst 'main roads' have seen an increase of 11%.

The overall 12% reduction in 'total' traffic flows in the Harmood Street scheme area differs from the traffic trends observed by TfL which suggest traffic levels on the Inner London 'Transport for London Road Network' (TLRN) were 10% higher in July 2021 compared to December 2020. The differing trends suggest general traffic levels are returning to normal, and that the trends observed in the Harmood Street scheme boundary are not likely due to effects of Covid-19, but more so due to the scheme implementation. Similarly, traffic data from Camden Roads (VAS) suggests traffic flows are 11% higher in July 2021 than they were in December 2020 across 11 sites in LB Camden.

## Cycling Data

### Cycle Counts

'Before-scheme' cycle data was unavailable at 6 locations. 'After-scheme' data for sites 1-4 has been sourced from automatic traffic counts (July 2021). Cycle data for Prince of Wales Road, Chalk Farm Road and Kentish Town Road has been sourced from the 'Vivacity' sensors. Where comparable, cycle levels were higher at both monitoring sites in July 2021 ('After-scheme') compared to December 2020 ('Before-scheme').

### Average Daily Cycle Flows

| Site ID | Road                 | Between                | Before | After | % Change |
|---------|----------------------|------------------------|--------|-------|----------|
| 1       | Malden Crescent      | North of Mead Close    |        | 181   |          |
| 2       | Harmood Street       | North of Powlett Place |        | 201   |          |
| 3       | Harmood Street       | South of Collard Place |        | 182   |          |
| 4       | Castlehaven Road     | North of Lewis Street  |        | 536   |          |
| 5       | Castlehaven Road     | South of Hawley Road   |        |       |          |
| 6       | Prince of Wales Road | West of Ryland Road    | 530    | 927   | 75%      |
| 7       | Chalk Farm Road      | South of Castle Road   | 414    | 1,557 | 276%     |
| 8       | Kentish Town Road    | North of Hartland Road |        | 4,314 |          |

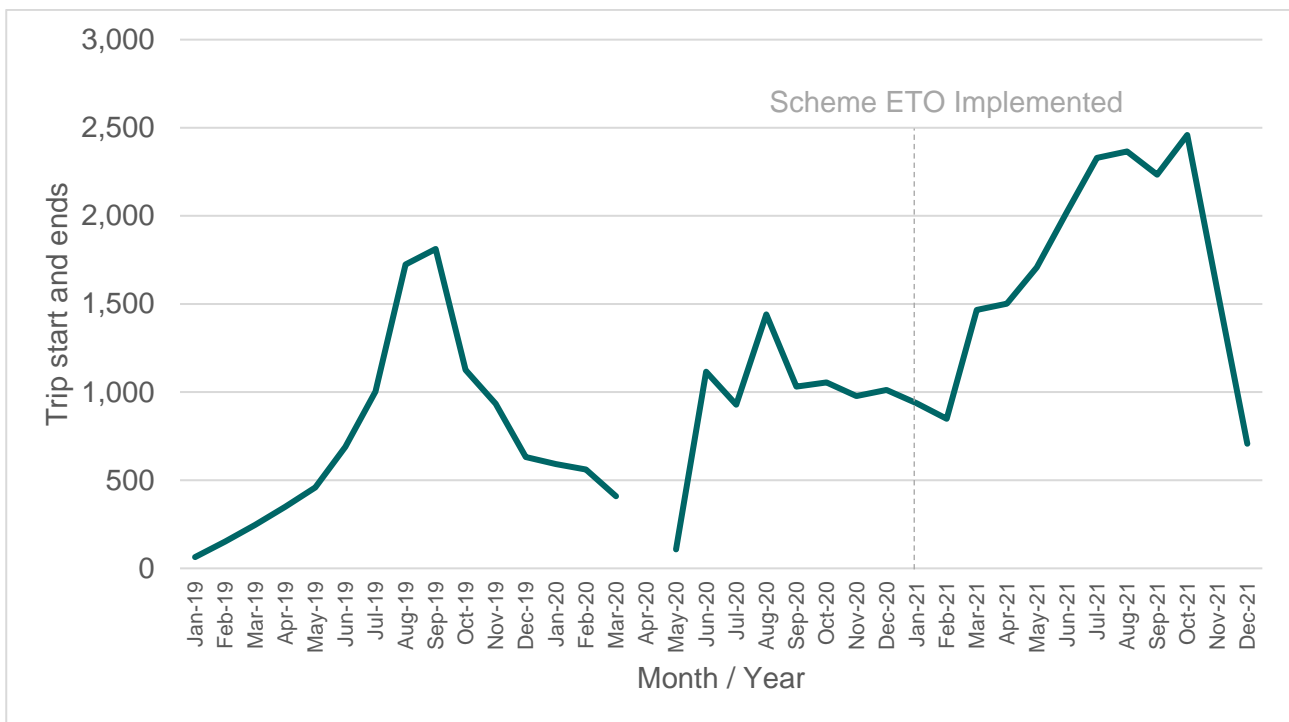


### Lime Bicycle Trip Start and End Data

Monitoring of trips (starts and ends) in the Harmond Street Scheme area by Lime (bike rental operator) over 2019, 2020 and 2021 indicates that cycling levels have risen sharply from February 2021 onwards. A significant drop in cycle hire has been observed during December 2021, this is likely due to seasonality and the Covid-19 Plan B restrictions being implemented.

The graph below illustrates the absolute number of trip starts or ends in the Harmond Street Scheme from January 2019 to the end of December 2021, which represents the most recent available data.

### Lime Cycle Trips in Harmond Street Scheme Area 2019-2021 (Lime cycle counts)



*N.B Data was not available for April 2020*

Comparison of data from February and March 2020 ('Before-scheme') and February and March 2021 ('After-scheme') shows that Lime bike usage has increased from 485 to 1,158 trips (starts and ends) over a two month period in the scheme area, which is equivalent to a 139% rise.

In October 2021, Lime recorded the highest number of e-bike rides in the Harmond Street Scheme area since monitoring began at 2,459 trips which is a 133% increase relative to October 2020 (1,055 trips), and a 118% increase relative to October 2019 (1,126 trips).



## ⚠ Road Safety (Collision Data)

STATS19 Collision data has been sourced from TfL for the most recent period available, which comprises 1 January 2018 to 30 June 2021. A summary of the data is provided at Appendix D.

Analysis of the data indicates a total of 99 collisions involving casualties have been recorded in the Harmond Street scheme area between 1 January 2018 and 27 January 2021, prior to the implementation of the scheme. Of these personal injury accidents, 31 incidents involved injuries to cyclists with 23 recorded as slight in severity, and 8 of serious severity.

Following scheme implementation, a total of 12 collisions involving casualties in the Harmond Street scheme area between 28 January 2021 and 30 June 2021 have been recorded. Of these 12 collisions, 2 incidents involved injuries to cyclists, both of which were slight in severity.

The graph below shows the number of collisions by severity by month. 'Before-scheme' data is available between January 2018 and 27 January 2021, with five months available after scheme implementation at the time of writing. Road safety data will continue to be reviewed as more data for the post-scheme period becomes available.

Number of collisions classified by severity in Harmond Street Scheme Area



*N.B. National lockdowns due to the Covid-19 pandemic were in place during 23 March – 10 May 2020, 5 November – 24 November 2020 and 6 January – 29 March 2021. London also entered Tier 4 (prior to third lockdown on 6<sup>th</sup> January 2021) on 21<sup>st</sup> December 2020.*

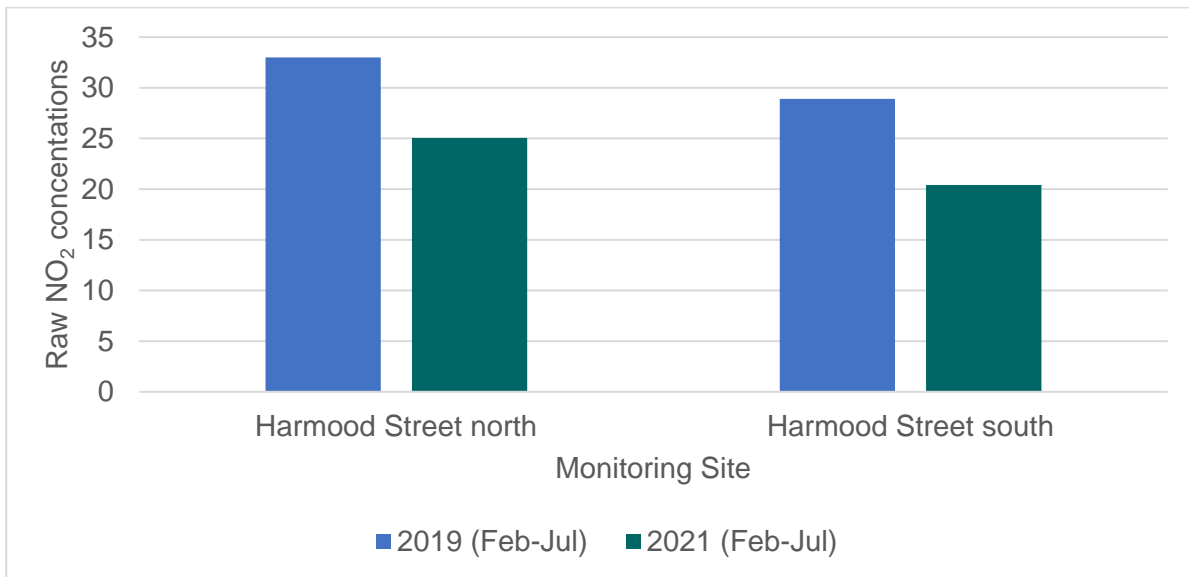
'Before-scheme', a cluster of collisions occurred at the southern end of Harmond Street, all 4 of which were classed as 'slight' in severity. A single collision was recorded in 2020 on Harmond Street, north of Harmond Place. A further single collision was recorded at the junction of Harmond Street/Prince of Wales Road and involved a cyclist. No collisions have been recorded 'After-scheme' at these locations.



## Air Quality

Two monitoring tubes have been installed as part of the Harmond Street scheme to monitor changes in Nitrogen Dioxide (NO<sub>2</sub>) concentrations. The graph below shows the average raw NO<sub>2</sub> concentrations recorded in Feb-Jul 2019 ('Before-scheme'), compared to the average concentrations recorded in Feb-Jul 2021 ('After-scheme'). As shown on the graph, NO<sub>2</sub> concentrations have fallen at both monitoring sites.

Average NO<sub>2</sub> concentrations (µg/m<sup>3</sup>) on Harmond Street



*N.B. February and March 2021 data unavailable at Harmond Street south.*

The data above is raw and unadjusted against the Government's bias adjustment factor. Therefore, this data cannot be measured against the National Air Quality Objective. A breakdown of the raw air quality data is provided in Appendix D.

Air quality in the Harmond Street scheme area will continue to be monitored to establish any changes arising 'After-scheme' in the coming months. It should be noted that air pollution is caused by multiple factors and whilst traffic is an important contributor it may be difficult to single out the impact of an individual factor.





# Appendix A: Traffic Data Methodology

## Traffic Count Data

To monitor and review the impacts of the scheme, traffic count data was collected before and after the opening of the scheme as follows:

- Before: Automatic traffic counts and ‘Vivacity’ sensors have been used to provide ‘Before-scheme’ data for a two-week period in March 2019. Data for a further 3 locations has been collected for a two-week period in December 2020. Data for traffic count 4 (Castlehaven Road) has been collected for a two-week period in November 2017.
- After: Automatic traffic counts have been used to provide ‘After-scheme’ data for a two-week period in July 2021. Vivacity sensors were used at traffic count 6, 7 and 8 for the same period.

If a full day of data was unavailable from the traffic counts, then this day was excluded from the average daily calculation of traffic volumes.

### Summary of Survey Data

| Site | Before-scheme |                         |      | After-scheme |                                                  |      |
|------|---------------|-------------------------|------|--------------|--------------------------------------------------|------|
|      | Method        | Dates                   | Days | Method       | Dates                                            | Days |
| 1    | ATC           | 03/03/2019 – 16/03/2019 | 14   | ATC          | 06/07/2021 – 12/07/2021, 17/07/2021 – 23/07/2021 | 9    |
| 2    | ATC           | 17/03/2019 – 30/03/2019 | 14   | ATC          | 07/07/2021 – 20/07/2021                          | 13   |
| 3    | ATC           | 17/03/2019 – 30/03/2019 | 14   | ATC          | 07/07/2021 – 20/07/2021                          | 13   |
| 4    | ATC           | 05/11/2017 – 18/11/2017 | 14   | ATC          | 07/07/2021 – 20/07/2021                          | 14   |
| 5    | ATC           | 05/12/2020 – 18/12/2020 | 14   |              |                                                  |      |
| 6    | Vivacity      | 05/12/2020 – 18/12/2020 | 14   | Vivacity     | 07/07/2021 – 20/07/2021                          | 14   |
| 7    | Vivacity      | 05/12/2020 – 18/12/2020 | 14   | Vivacity     | 07/07/2021 – 20/07/2021                          | 14   |
| 8    |               |                         |      | Vivacity     | 07/07/2021 – 20/07/2021                          | 14   |



## Appendix B: ATC Traffic Data

### Harmood Street Average Daily Traffic Flows – Raw Data

| Site ID | Road Name        | Description            | Direction  | Before |        |         | After    |        |        |         |          |
|---------|------------------|------------------------|------------|--------|--------|---------|----------|--------|--------|---------|----------|
|         |                  |                        |            | Cycles | Light* | Heavy** | Total*** | Cycles | Light* | Heavy** | Total*** |
| 1       | Malden Crescent  | North of Mead Close    | Northbound |        | 2,248  | 370     | 2,618    | 87     | 1,809  | 144     | 1,953    |
| 1       | Malden Crescent  | North of Mead Close    | Southbound |        | 965    | 230     | 1,196    | 95     | 1,358  | 111     | 1,469    |
| 1       | Malden Crescent  | North of Mead Close    | Combined   |        | 3,213  | 600     | 3,814    | 181    | 3,167  | 255     | 3,422    |
| 2       | Harmood Street   | North of Powlett Place | Northbound |        | 705    | 65      | 769      | 69     | 233    | 12      | 245      |
| 2       | Harmood Street   | North of Powlett Place | Southbound |        | 1,558  | 151     | 1,709    | 132    | 242    | 10      | 252      |
| 2       | Harmood Street   | North of Powlett Place | Combined   |        | 2,263  | 216     | 2,479    | 201    | 474    | 22      | 496      |
| 3       | Harmood Street   | South of Collard Place | Northbound |        | 779    | 58      | 838      | 80     | 191    | 11      | 203      |
| 3       | Harmood Street   | South of Collard Place | Southbound |        | 1,080  | 108     | 1,187    | 102    | 209    | 13      | 222      |
| 3       | Harmood Street   | South of Collard Place | Combined   |        | 1,859  | 166     | 2,025    | 182    | 401    | 24      | 425      |
| 4       | Castlehaven Road | North of Lewis Street  | Northbound |        | 2,340  | 288     | 2,628    | 302    | 1,278  | 65      | 1,343    |
| 4       | Castlehaven Road | North of Lewis Street  | Southbound |        | 2,357  | 204     | 2,561    | 234    | 1,368  | 49      | 1,417    |
| 4       | Castlehaven Road | North of Lewis Street  | Combined   |        | 4,696  | 492     | 5,188    | 536    | 2,647  | 114     | 2,761    |
| 5       | Castlehaven Road | South of Hawley Road   | Northbound |        | 5,122  | 2,069   | 7,192    |        |        |         |          |
| 5       | Castlehaven Road | South of Hawley Road   | Southbound |        | 195    | 0       | 196      |        |        |         |          |



|   |                      |                        |            |     |        |       |        |      |        |       |        |
|---|----------------------|------------------------|------------|-----|--------|-------|--------|------|--------|-------|--------|
| 5 | Castlehaven Road     | South of Hawley Road   | Combined   |     | 5,318  | 2,070 | 7,387  |      |        |       |        |
| 6 | Prince of Wales Road | West of Ryland Road    | Eastbound  | 481 | 5,584  | 249   | 5,833  | 781  | 5,769  | 275   | 6,044  |
| 6 | Prince of Wales Road | West of Ryland Road    | Westbound  | 49  | 5,070  | 298   | 5,368  | 146  | 5,030  | 275   | 5,304  |
| 6 | Prince of Wales Road | West of Ryland Road    | Combined   | 530 | 10,654 | 548   | 11,202 | 927  | 10,798 | 550   | 11,348 |
| 7 | Chalk Farm Road      | North of Hartland Road | Northbound | 186 | 3,665  | 432   | 4,097  | 791  | 4,527  | 438   | 4,965  |
| 7 | Chalk Farm Road      | North of Hartland Road | Southbound | 228 | 4,570  | 448   | 5,018  | 765  | 5,775  | 491   | 6,265  |
| 7 | Chalk Farm Road      | North of Hartland Road | Combined   | 414 | 8,235  | 880   | 9,115  | 1557 | 10,302 | 929   | 11,231 |
| 8 | Kentish Town Road    | South of Castle Road   | Northbound |     |        |       |        | 2285 | 8,651  | 852   | 9,503  |
| 8 | Kentish Town Road    | South of Castle Road   | Southbound |     |        |       |        | 2029 | 8,707  | 697   | 9,404  |
| 8 | Kentish Town Road    | South of Castle Road   | Combined   |     |        |       |        | 4314 | 17,357 | 1,550 | 18,907 |

\*Light = Motorcycles, Cars and Light Goods Vehicles \*\*Heavy = Heavy Goods Vehicles + Public Service Vehicles \*\*\*Total excludes Cycles



## Appendix C: TfL STATS19 Data

Collision data for Harmood Street scheme boundary

| Month  | Number of collisions | Slight | Serious | Fatal |
|--------|----------------------|--------|---------|-------|
| Jan-18 | 2                    | 2      | 0       | 0     |
| Feb-18 | 1                    | 1      | 0       | 0     |
| Mar-18 | 4                    | 4      | 0       | 0     |
| Apr-18 | 4                    | 4      | 0       | 0     |
| May-18 | 0                    | 0      | 0       | 0     |
| Jun-18 | 7                    | 7      | 0       | 0     |
| Jul-18 | 4                    | 3      | 1       | 0     |
| Aug-18 | 0                    | 0      | 0       | 0     |
| Sep-18 | 2                    | 1      | 0       | 0     |
| Oct-18 | 10                   | 8      | 2       | 0     |
| Nov-18 | 3                    | 2      | 1       | 0     |
| Dec-18 | 2                    | 2      | 0       | 0     |
| Jan-19 | 5                    | 5      | 0       | 0     |
| Feb-19 | 2                    | 1      | 1       | 0     |
| Mar-19 | 0                    | 0      | 0       | 0     |
| Apr-19 | 4                    | 4      | 0       | 0     |
| May-19 | 6                    | 5      | 1       | 0     |
| Jun-19 | 4                    | 4      | 0       | 0     |
| Jul-19 | 3                    | 0      | 3       | 0     |
| Aug-19 | 4                    | 1      | 3       | 0     |
| Sep-19 | 5                    | 5      | 0       | 0     |
| Oct-19 | 3                    | 3      | 0       | 0     |
| Nov-19 | 1                    | 1      | 0       | 0     |
| Dec-19 | 0                    | 0      | 0       | 0     |
| Jan-20 | 1                    | 1      | 0       | 0     |
| Feb-20 | 5                    | 3      | 2       | 0     |
| Mar-20 | 1                    | 1      | 0       | 0     |
| Apr-20 | 1                    | 1      | 0       | 0     |
| May-20 | 1                    | 1      | 0       | 0     |
| Jun-20 | 1                    | 1      | 0       | 0     |
| Jul-20 | 2                    | 2      | 0       | 0     |
| Aug-20 | 1                    | 1      | 0       | 0     |
| Sep-20 | 2                    | 2      | 0       | 0     |
| Oct-20 | 3                    | 1      | 2       | 0     |
| Nov-20 | 2                    | 1      | 1       | 0     |
| Dec-20 | 0                    | 0      | 0       | 0     |





|        |   |   |   |   |
|--------|---|---|---|---|
| Jan-21 | 4 | 3 | 1 | 0 |
| Feb-21 | 2 | 2 | 0 | 0 |
| Mar-21 | 0 | 0 | 0 | 0 |
| Apr-21 | 3 | 3 | 0 | 0 |
| May-21 | 2 | 2 | 0 | 0 |
| Jun-21 | 4 | 3 | 1 | 0 |



## Appendix D: Air Quality Data

Raw air quality data for Harmood Street scheme monitoring sites (NO<sub>2</sub> µg/m<sup>3</sup>)

| Harmood Street Scheme       | 2019 (Feb-Jul) | 2021 (Feb-Jul) | Months included           |
|-----------------------------|----------------|----------------|---------------------------|
| Harmood Street north (LC1)  | 33.00          | 25.05          | Feb/Mar/Apr/May/June/July |
| Harmood Street south (LC11) | 28.90          | 20.41          | Apr/May/June/July         |