

Greater Cambridge Partnership: Covid-19 Initial Impacts.

Identifying and monitoring the known impact of social distancing measures on traffic and transport in the Greater Cambridge area.

Key Headlines

Analysis across a range of datasets has shown significant reduction in traffic volumes and public transport use as a result of Covid-19 related social distancing measure, as fewer people travel throughout the day. This has mirrored national trends.

For the purpose of this initial briefing, key **local datasets** have been analysed from Monday 06 January 2020 onwards. Broadly speaking, the period 06 January 2020 - 15 March 2020 has been treated as a 'pre-social distancing' period for comparison but there has been some variation on comparative dates, depending on data availability.

Traffic Counts

There has been an **overall reduction of 56% in average daily motor vehicle counts across monitored traffic sensors**¹. All modes have reduced, with car counts seeing the biggest reductions across the whole monitored network.

Across the **monitored network of traffic sensors and counters**, counts of goods vehicles have seen an average reduction of 33% and bus counts have seen an average reduction of 41%.

There is no significant variation in reductions in motor vehicle counts between peak and non-peak times.

Parking

There has been an **83% reduction in average daily car park use across all Cambridge City multi-storey car parks**. This includes the Grand Arcade, Grafton East, Grafton West, Park Street and Queen Anne's.

All of the car parks showed a fairly consistent reduction, centred on the -83% overall reduction, with Grafton East showing the largest decrease in recorded use over this period (-88%). Grafton West showed the smallest reduction (-73%).

In terms of length of car park stays, the largest reductions were in mid-term stays, between 2-6 hours, where reductions were over 90%.

Both short-term (**less than one hour, -65%**) and long term stay (**24 hours+, -74%**) showed lower levels of reduction than the overall average.

Air Quality

In April 2020, **measured Nitrogen Dioxide levels in Cambridge City were on average 7 micrograms per cubic metre lower** compared with an average for the previous 3 years. This showed an average **33% decrease across all monitored locations**.

All air quality sites monitored recorded a fall in air pollution compared with what might be expected. The largest reductions in air pollution are in the city centre.

¹ Maps of all traffic, cycle, pedestrian and air quality monitoring locations have been included in the appendix of this document.

The measurements for particulate matter have been confounded by an extended period of weather dominated by easterly winds. **Particulate Matter levels are higher at the moment than usual.**

Cycling and Pedestrians

Across the monitored smart sensors, there has been an average **decrease of 39%* in daily cycle counts 26%* in daily pedestrians counts.**

Higher reductions in pedestrian counts can be seen on the sensors located close to the city centre. Mill Road (nr Parkers Piece) and East Road, for example, have both seen reductions of over 60%.

Footfall data from key retail locations across the Cambridge BID area showed that there has been a **reduction in average daily footfall in retail locations of 80%².** The largest decrease across monitored locations is on Rose Crescent (-87%), which is a shopping lane in the City Centre.

Public Transport

Since social distancing measures were introduced, **overall commercial bus services have reduced in line with national changes.³**

Patronage on commercial bus routes has reduced significantly⁴ against levels prior to social-distancing measures.

Journey Times

Across all of the monitored bus routes, there has been an **overall reduction in bus drive time of 27%, averaged across inbound and outbound journeys**

Of the monitored bus routes, Hills Road has had the largest reduction in drive time (-34% averaged across inbound and outbound journeys). Huntingdon Road and Newmarket Road have both seen much smaller overall reductions in drive time of 18% and 22% respectively.

* These **headline percentages** look at **reductions across individual monitoring sites, rather than the absolute total reduction of recorded pedestrian/cyclists.** This helps us to understand variance across the city as a whole and reflects that residential areas, away from the city centre, have generally seen lower reductions in cycle/pedestrian counts. These high volume reductions in counts across key cycling routes and retail locations, have resulted in larger decreases in absolute city-wide counts.

² Cambridge BID

³ Update provided by Cambridgeshire County Council Public Transport Team

⁴ Update provided by Cambridgeshire County Council Public Transport Team

Introduction:

The aim of this briefing is to begin the local assessment and monitoring of the impact of Covid-19 on the transport network in the Greater Cambridge area.

This monitoring will cover the current situation and initial impact, throughout the period of restrictions, with a view to develop into a longer term Covid-19 monitoring framework for the Greater Cambridge Partnership (GCP) beyond the initial response.

This paper will help to understand the local impact over the first month of social distancing methods. Headline **data outputs** from this briefing will be updated monthly so that key datasets can be monitored during the initial impact period but then also as restrictions are lifted.

Headline indicators across six key areas have been identified to support this monthly monitoring. The policy areas addressed are:

- Travel
- Parking
- Air Quality
- Walking and Cycling
- Public Transport
- Journey Times

Data

Within this initial impact briefing, the latest available data will be analysed.

Within the monthly data updates to the Greater Cambridge Partnership, a set of key, permanent indicators will be updated, followed by a short update on each of policy areas. **These policy areas and data indicators are reflected within the key headlines section of this initial document.** This will help to lay out the key data sources that will be analysed to support headline monitoring to the Greater Cambridge Partnership moving forward.

Broadly speaking, key datasets will be monitored from Monday 06 January 2020 onwards. The period 06 January 2020 - 15 March 2020 will be treated as the 'pre-social distancing' period. This will be treated as the baseline for which future data outputs can be compared against. The comparative dates used are reviewed depending on the dataset and data availability though, with some variation.

Travel

In order to understand traffic flows in the Greater Cambridge area, hourly and daily road traffic counts across a number of monitoring sites have been analysed. Comparisons have been carried out between the following two periods:

- *Before social distancing measures: Monday 6th January to Sunday 15th March*
- *During social distancing measures: Monday 16th March- Sunday 19th April*

Across the Vivacity sensors⁵ and vehicle Automatic Traffic Counters (ATC)⁶ that were monitored in Cambridge and South Cambridgeshire, there has been an **overall reduction of 56% in average daily traffic counts**.

Table 1, below, shows the reductions between these two periods in **key locations** in Cambridge City by modal split. All modes have reduced, with cars seeing the biggest reductions across the network as a whole.

Across the **whole network** of sensors and counters monitored, goods vehicles have seen an average reduction of 33% across LGVs and HGVs and buses have seen a reduction of 41%.

Table 1: % change in daily average vehicle counts- 16/03/2020-19/04/2020 compared to 06/01/2020-15/03/2020, by key Cambridge locations

| Monitoring Location | All Vehicles (%) | Motorcycles (%) | Cars/Vans (%) | Light Good Vehicles (%) | Heavy Goods Vehicles (%) | Buses (%) |
|-------------------------------------|------------------|-----------------|---------------|-------------------------|--------------------------|-----------|
| Mill Road (nr Brookfields Hospital) | -55 | -33 | -58 | -40 | -38 | -49 |
| Mill Road (nr Parkers Piece) | -65 | -45 | -68 | -52 | -40 | -53 |
| Coldhams Lane | -53 | -41 | -54 | -40 | -47 | -55 |
| East Road | -59 | -20 | -62 | -37 | -39 | -63 |
| Hills Rd (nr Long Rd) | -58 | -16 | -61 | -36 | -33 | -42 |
| Hills Rd (nr Leisure Park) | -62 | -28 | -67 | -36 | -31 | -47 |
| Newmarket Road | -57 | -53 | -60 | -37 | -29 | -51 |
| Milton Road (nr Kings Hedges Rd) | -56 | -47 | -60 | -33 | -35 | -40 |
| Milton Road (nr Gilbert Rd) | -57 | -33 | -60 | -35 | -27 | -35 |
| Histon Rd (nr Kings Hedges Rd) | -59 | -47 | -62 | -37 | -30 | -36 |
| Histon Rd (nr Victoria Rd) | -59 | -35 | -60 | -53 | -56 | -61 |

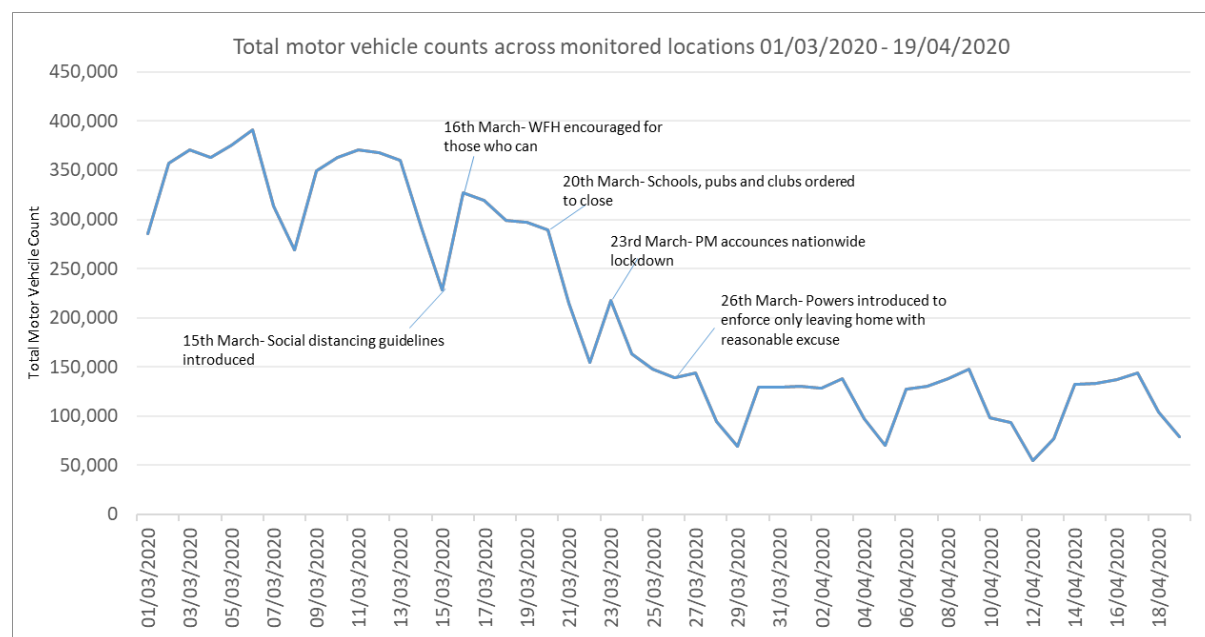
⁵ Vivacity Sensors- There are currently 22 smart sensors installed around Cambridge City, provided by Vivacity Labs. The sensors can identify and provide counts for road users across eight different classes. For vehicles, this includes, Motorcycles, Cars, Vans and Goods Vehicles. These are only located in Cambridge City. **All locations are shown in Appendix D.**

⁶ Cambridgeshire County Council has an **Automatic Traffic Counter (ATC) network** made up of battery powered wire loop detectors operating from permanent loops cut into the road. Within Cambridge City, these are generally located on radial routes and along the River Cam screen line. **All locations are shown in Appendix B**

Analysing changes by individual modes, headline reductions are consistent across different parts of the city. For example, across **all key locations monitored**, the reduction in all recorded traffic between the two periods was between 55-65%. This was also the same for just cars/vans also.

The chart below shows the **total motor vehicles recorded daily across the monitoring sensors in Cambridge and South Cambridgeshire from 1st March to 19th April**, including a timeline of key events. A list locations monitored within this chart can be found in **Appendix F**.

Figure 1: Total daily vehicle counts in Cambridge City and South Cambridgeshire between 1st March and 19th April⁷



The above chart will be updated monthly, to monitor the impact of any lifting in social distancing measures.

Table 2, below, shows the changes in daily average vehicle counts across the **Vivacity sensor network** between the two periods, broken down by time of day. The locations of all Vivacity sensors can be found in Appendix D.

The AM peak is defined as 7am-10am and the PM peak is defined as 4pm-6pm. **There is a slightly higher reduction in traffic during the PM peak, but overall there is not significant variance between the time periods and the overall daily average reduction.**

Table 2: % change in daily average motor vehicles between 16/03/2020-19/04/2020 compared to 06/01/2020-15/03/2020, by time period

| | AM peak | Non peak | PM peak |
|---------------------------|---------|----------|---------|
| Daily average 06/01-15/03 | 42,582 | 170,448 | 32,343 |
| Daily average 16/03-19/04 | 19,180 | 75,013 | 13,532 |
| % Change | -55% | -56% | -58% |

⁷ A list of all monitored locations can be found in **Appendix F**.

Parking

Between *Monday 16th March and Sunday 5th April*, there was an **83% reduction in average daily car park use across all Cambridge City multi-storey car parks**. This includes the Grand Arcade, Grafton East, Grafton West, Park Street and Queen Anne's and is a comparison against the period *Monday 6th January to Sunday 15th March*.

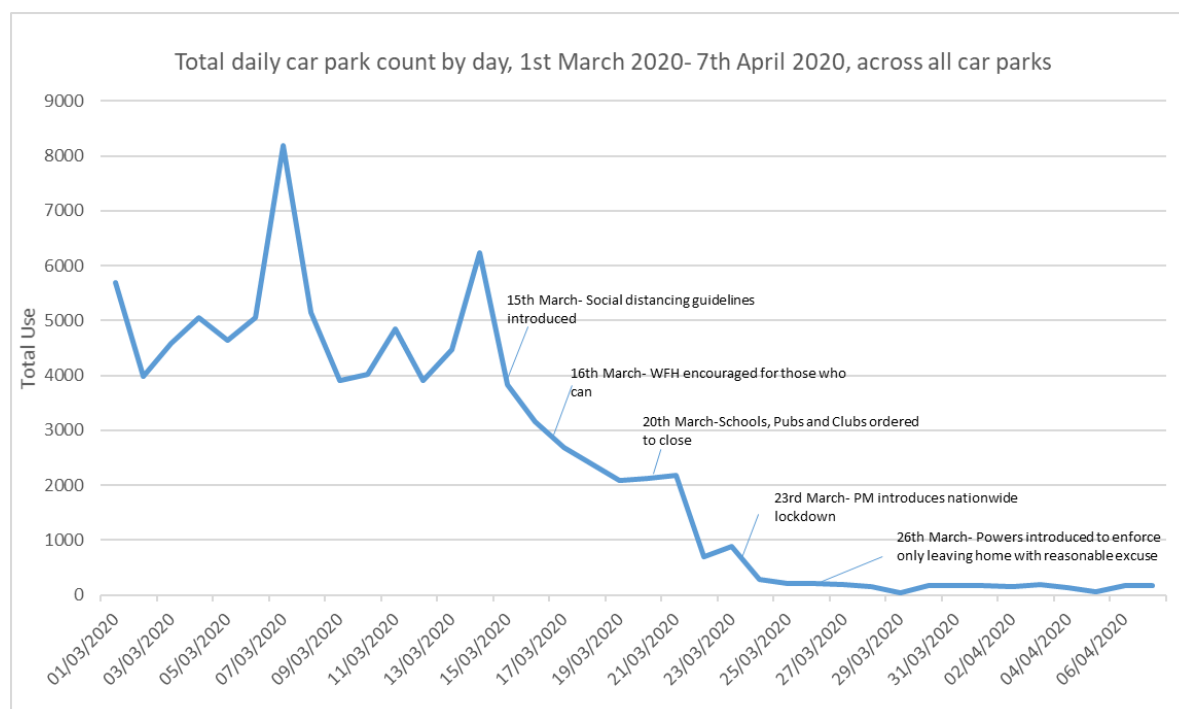
The table below breaks down the % daily average difference in use between these two periods down by individual car park. All of the car parks showed a fairly consistent reduction, centred on the 83% overall reduction. Grafton East showed the largest decrease in recorded use over this period (88%).

Table 3: % Difference in daily average car park usage between 06/01/2020-15/04/2020 and 16/03/2020- 05/04/2020 by individual car park

| Car Park | % Difference from before restrictions to after |
|--------------|--|
| Grand Arcade | -82% |
| Grafton East | -88% |
| Grafton West | -73% |
| Park Street | -83% |
| Queen Anne's | -86% |

In order to start understanding the impact of social distancing measure on overall parking in Cambridge City, the figure below shows the total daily count of car park use across the five sites, against key events.

Figure 2: Total daily total car park counts in Cambridge City, 1st March- April 7th



The above chart will be updated monthly, to monitor the impact of any lifting in social distancing measures.

All Multi-Storey Car Parks by length of stay

The **overall reduction (-83%)** in car park use between the two periods is broken down by length of stay in the table below. This shows that the **largest reductions were in mid-term car park stays, between 2-6 hours, where reductions were over 90%.**

Table 4: % Difference in daily average car park usage between 06/01/2020-15/03/2020 and 16/03/2020 and 05/04/2020 by length of stay

| | Total (Daily Average) | Up to 1 hr | 1 to 2 hrs | 2 to 3 hrs | 3 to 4 hrs | 4 to 5 hrs | 5 to 6 hrs | 6 to <24 hours | 24 hours + |
|--|--------------------------------------|---------------------------|-----------------------|-----------------------|---------------------------|---------------------------|---------------------------|----------------------------------|---------------------------|
| Monday 6th January - Sunday 15th March | 5,221 | 1,090 | 1,663 | 1,163 | 628 | 275 | 110 | 142 | 17 |
| Monday 16th Match- Sunday 5th April | 874 | 380 | 254 | 92 | 37 | 18 | 11 | 31 | 4 |
| % Difference | -83 | -65 | -85 | -92 | -94 | -93 | -90 | -78 | -74 |

Both short-term (**less than one hour, -65%**) and long term stay (**24 hours+, -74%**) showed lower levels of reduction than the overall average.

Surface Car Parks Monthly

As well as the 5 multi-storey car parks, monthly car park usage of three surface car parks (Adam and Eve, Castle Hill and Gwydir Street) will also be monitored. It should be noted that this data is supplied as a monthly, rather than daily, count for the car parks. This means that for this briefing, reductions on use for the month will be lower as they incorporate the first half of March when social-distancing measures weren't implemented.

The next monthly update will incorporate the month of April to show the full impact of social-distancing measure on surface car park use. Despite this, the table below does show that there was reductions in all 3 car parks in March, when compared to the previous 6 month average.

Table 5: Difference in surface car park use in March when compared to the previous 6 month average

| Car Park | % Difference in monthly use: March compared to September-February average |
|----------------------|--|
| Adam and Eve | -45.7 |
| Castle Hill | -42.0 |
| Gwydir Street | -17.6 |

Gwydir Street car park showed the lowest reduction in March at 17.6%, possibly because this is located in a more residential area but the full impact of covid-19 on this car park won't be fully understood until a full month data during social distancing measures is available.

Air Quality Data

Cambridge City Council has 5 air quality monitoring stations that can provide hourly measurements of air pollution in Cambridge. These are located on:

- **Gonville Place**- located at the busy road traffic junction of Hills Road/Gonville Place and Lensfield Road crossroads.
- **Montague Road**- located at the end of Montague Road, adjacent to Elizabeth Way, a busy section of the inner ring road. Levels of air pollution recorded are lower than might be expected because the monitor picks up the prevailing south west winds.
- **Newmarket Road**- is located about 100 metres from the Elizabeth Way roundabout on one of the main feeder roads into Cambridge. The road is fairly wide, so levels of air pollution recorded are lower than might be expected.
- **Parker Street**- located in a two-way road which narrows at one end near the bus station. Although this street is in the restricted Core Area, this monitoring station records the highest levels of air pollution in Cambridge.
- **Regent Street**- located in the restricted Core Area.

Analysis of pollutants across all of the above locations showed:

- In April 2020⁸, **measured Nitrogen Dioxide levels are on average 7 micrograms per cubic metre lower** compared with an average for the previous 3 years.
- In April 2020, **measured Nitrogen Dioxide levels are on average 33% lower compared** with an average for the previous 3 years.
- The largest reductions in air pollution are in the city centre within the inner ring road where bus emissions are the dominant local source.
- **All sites recorded a fall in air pollution** compared with what might be expected.
- The measurements for particulate matter have been confounded by an extended period of weather dominated by easterly winds. **PM levels are higher at the moment than usual. This is obscuring any obvious improvement in particulate levels for April 2020**

Table 6, below, shows actual levels of recorded nitrogen dioxide in April 2020 against what was expected for the same period. It shows that the changes (*against previous three year average and expected levels*) in nitrogen dioxide vary, and this variation depends on the nature of the site.

Across all sites, reductions were seen in nitrogen dioxide levels, when compared to average levels.

The **greatest changes are seen in the historic city centre restricted area** where the traffic is dominated by buses, taxis and delivery vehicles. The smallest changes are seen on the less central roads where the sites are more open with better dispersion for air pollution.

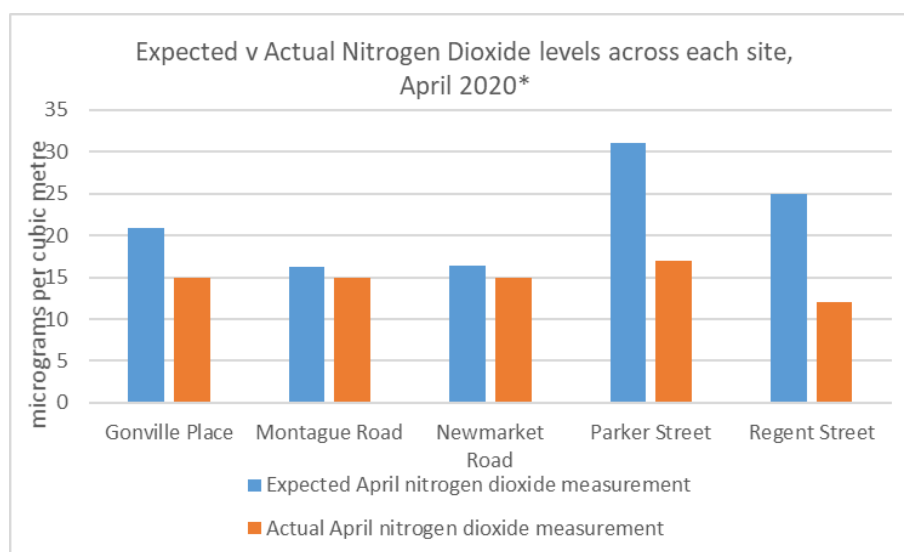
⁸ Data analysed to 23 April 2020.

Table 6: Actual v Expected Nitrogen Dioxide measurement across all monitoring sites, April 2020

| Site | Expected April nitrogen dioxide measurement | Actual April nitrogen dioxide measurement | Difference between expected and actual recording | Percentage change (%) between actual recording and previous 3 year average. |
|----------------|---|---|--|---|
| Gonville Place | 20.9 | 15 | -5.9 | -28 |
| Montague Road | 16.3 | 15 | -1.3 | -8 |
| Newmarket Road | 16.4 | 15 | -1.4 | -9 |
| Parker Street | 31.0 | 17 | -14 | -45 |
| Regent Street | 25.0 | 12 | -13 | -52 |

The chart below demonstrates the difference in recorded nitrogen dioxide levels against expected reductions by individual site. This shows that the biggest reductions were in Parker Street and Regent Street- two city centre locations. This was then followed by Gonville Place.

Figure 3: Expected v actual nitrogen dioxide levels across each site, April 2020⁹



The legal objective for Nitrogen Dioxide levels is an annual mean of 40ug/m3. If the current decreases in recorded levels were sustained, it is very likely that all sites will be compliant with the current objective.

It has been difficult to provide detailed analysis of particulate matter variations relating to the reduction in traffic or Covid-19 at this point. **Initial analysis has showed that, as it stands, particulates have increased, because of the wind direction. Levels of particulates will continue to be monitored over future months and consideration will be given to if and how corrections for weather can be made.** There will be a small impact (fewer particulates) at locations close to busy roads, but it is not possible to measure the impact when there is a much larger impact from the current prevailing winds.

⁹ Data up to 23rd of April is included

Cycling and Walking

In order to understand pedestrian and cycle movements in the Greater Cambridge area, hourly and daily pedestrian and cycle counts across a number of monitoring sites have been analysed.

Comparisons have been carried out between the following two periods:

- *Before social distancing measures: Monday 6th January to Sunday 15th March*
- *During social distancing measures: Monday 16th March- Sunday 19th April*

Cycling

Across the Vivacity sensors¹⁰ and cycle ATCs¹¹ in Cambridge there has been an **average 39%* reduction in recorded cyclists between all monitoring sites**. A list of all sites where total cycle counts have been monitored can be found in Appendix G.

Table 7 shows reductions on some of the **key cycle routes in the Cambridge City**. Cutter Ferry Bridge and Riverside Bridge are showing the smallest reductions of 40% and 41%. These locations are both along the River Cam towpath so are likely being used for daily exercise.

A large reduction can be seen at Carter Bridge (-73%), as less people are cycling to the train station. The largest change has been at Garret Hostel Lane (-79%), which is a city centre location.

Table 7: % change in daily average cyclists between 16/03/2020-19/04/2020 compared to 06/01/2020-15/03/2020

| Sensor/ATC Location | % Change |
|-----------------------------|----------|
| Mill Rd | -64% |
| East Rd | -56% |
| Milton Rd | -44% |
| Histon Rd | -42% |
| Hills Rd | -64% |
| Hills Rd (inbound) | -57% |
| Huntingdon Rd (inbound) | -57% |
| Beneath Cutter Ferry Bridge | -41% |
| Riverside Bridge | -40% |
| Carter Bridge | -73% |
| Garret Hostel Lane | -79% |

It is worth noting that the above reductions in **high volume and busy cycling locations** show larger reductions than the headline -39%* (which is the average across all sites outlined in Appendix G). This indicates that the absolute reduction in total cyclists is higher than the average across all sites.

Table 8, below, shows the change in total average daily cyclists by time period. This is calculated using a **sum of all cyclists recorded across the Vivacity sensors only [Appendix D]** and so is the

¹⁰ Vivacity Sensors- There are currently 22 smart sensors installed around Cambridge City, provided by Vivacity Labs. The sensors can identify and provide counts for cyclists and pedestrians. These are only located in Cambridge City. **All locations are shown in Appendix D.**

¹¹ Automatic Traffic Counter (ATC) network made up of battery powered wire loop detectors operating from permanent loops cut into the road. **Some of these counters record cycle counts**

* This **headline percentage** looks at **reductions across individual monitoring sites, rather than the absolute total reduction of recorded cyclists**. This helps us to **understand variance across the city as a whole** and reflects that residential areas, away from the city centre, have generally seen lower reductions in cycle/pedestrian counts. These high volume reductions in counts across key cycling routes and retail locations, have resulted in larger decreases in absolute city-wide counts.

change in counts across the **whole network**, rather than an average across individual sensors. The reduction of total cyclists recorded on the network in the morning peak (7am-10am) is over double that of the PM peak (4pm-6pm). There was a 67% decrease in the AM peak compared to a 32% decrease in the PM peak.

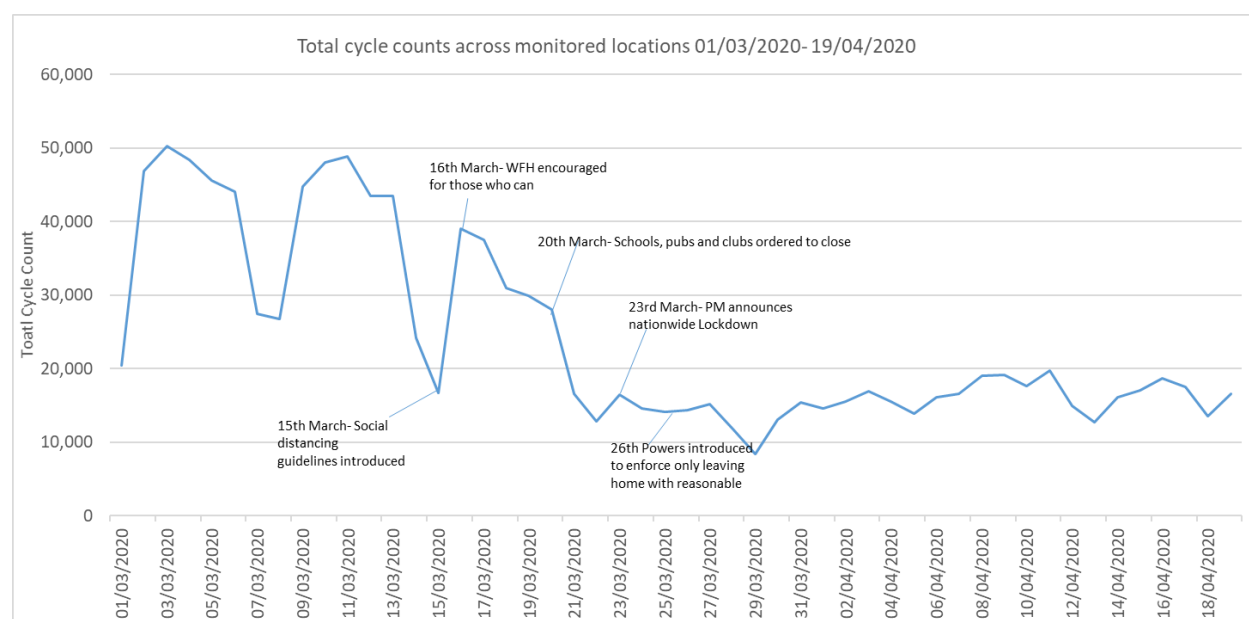
Table 8: % change in daily average recorded cyclists across the whole Vivacity network between 16/03/2020-19/04/2020 compared to 06/01/2020-15/03/2020 by time period

| | AM peak | Non peak | PM peak |
|--------------------------------|-------------|-------------|-------------|
| Daily average 06/01-15/03 | 8,334 | 14,819 | 3,483 |
| Daily average from 16/03-19/04 | 2,751 | 8,584 | 2,377 |
| % change | -67% | -42% | -32% |

The percentage decreases (particularly in the morning peak) in city-wide counts show that overall decreases in counts are higher than the headline -39% average across all sites. These larger decreases are driven by some large reductions on key routes.

The chart below shows the total cyclists recorded across all monitored locations in Cambridge, including a timeline of key events. The full list of monitored cycling locations can be found in Appendix G.

Figure 4: Total daily cycle counts in Cambridge City, 1st March- April 7th



The above chart will be updated monthly, to monitor the impact of any lifting in social distancing measures.

Pedestrians and Walking

Across monitored locations on the Vivacity sensor network [Appendix H] there has been an average **decrease of 26%* in daily pedestrian counts across individual sensors** between the two periods.

Table 9, below, shows the **reduction in daily average pedestrians on the busiest pedestrian routes on the sensor network. Higher reductions can be seen on the sensors located close to the city centre.** Mill Road (nr Parkers Piece) and East Road have both seen reductions of over 60%.

Smaller reductions can be seen on sensors located further away from the city centre, with Hills Road (nr Leisure Park) reducing by 27% and Milton Road by 35%. **Perne Road has seen the smallest reduction of these at 6%, likely due to it's residential location.**

Table 9: % change in daily average pedestrians between 16/03/2020-19/04/2020 compared to 06/01/2020-15/03/2020 on busiest pedestrian routes

| Location | % change in daily average pedestrian count |
|-----------------------------------|--|
| Mill Rd (nr Brookfields Hospital) | -51% |
| Mill Rd (nr Parkers Piece) | -64% |
| Cherry Hinton Rd | -42% |
| East Rd | -69% |
| Milton Rd (nr Arbury Rd) | -32% |
| Milton Rd (nr Gilbert Rd) | -35% |
| Hills Rd (nr Long Rd) | -27% |
| Hills Rd (nr Leisure Park) | -59% |
| Histon Rd | -66% |
| Perne Rd | -6% |

Table 10 shows the **locations where there has been an increase in daily average pedestrians.** These are largely in residential areas so may be due to an increase in people walking locally for exercise.

Table 10: % increase in daily average pedestrians between 16/03/2020-19/04/2020 compared to 06/01/2020-15/03/2020

| Location | % change in daily average pedestrian count |
|---------------|--|
| Vinery Rd | 6% |
| Coldhams Lane | 10% |
| Newmarket Rd | 4% |
| Milton Rd | 3% |
| Cambridge Rd | 12% |
| Mowbray Rd | 29% |

Table 11 shows the changes in daily average total pedestrians recorded across the whole Vivacity network [Appendix H] by time period. This is calculated using a **sum of all pedestrians recorded**

* This headline percentage looks at reductions across individual monitoring sites, rather than the absolute total reduction across all recorded cyclists. This helps us to understand variance across the city as a whole and reflects that residential areas, away from the city, have seen lower reductions than the much higher reductions seen in the city centre. These higher reductions in concentrated areas, as shown in retail footfall counts, have driven absolute reductions.

across the Vivacity sensors only and so is the change across the Vivacity network a whole, rather than an average of individual sensors. Similar to cycling, the reduction in the morning peak (7am-10am) is over double that of the PM peak (4pm-6pm), with a 63% decrease in the AM peak compared to 30% in the PM peak.

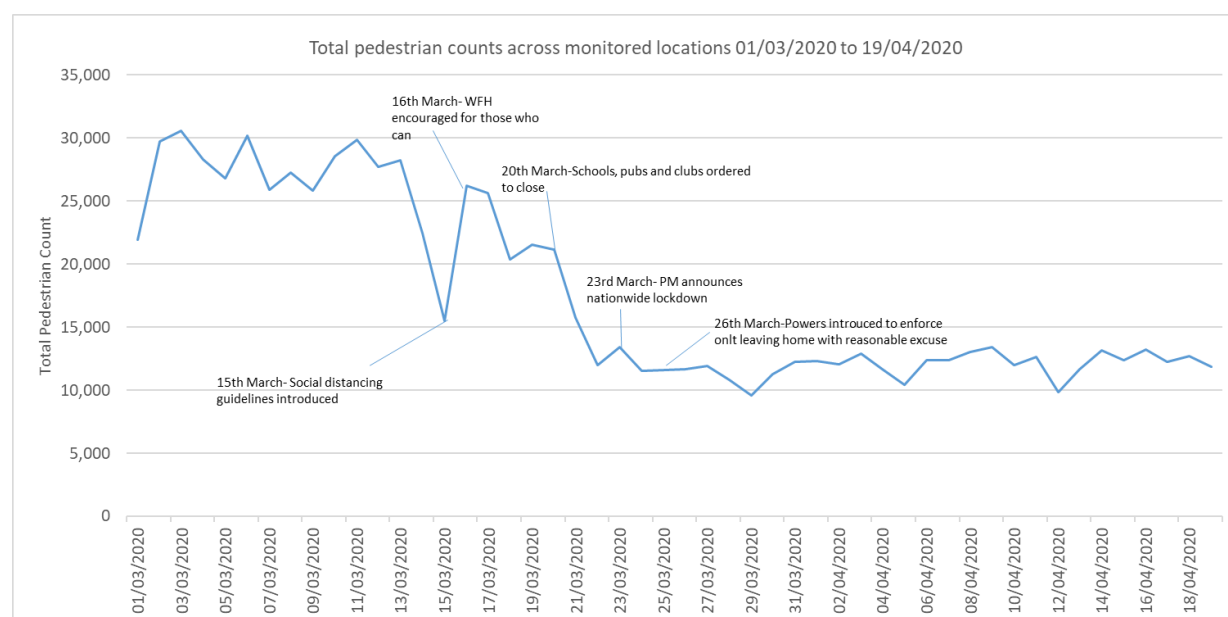
Table 11: % change in daily average pedestrians across the whole Vivacity network between 16/03/2020-19/04/2020 compared to 06/01/2020-15/03/2020 by time period

| | AM peak | Non peak | PM peak |
|--------------------------------|---------|----------|---------|
| Daily average 06/01-15/03 | 5,413 | 17,292 | 3,400 |
| Daily average from 16/03-19/04 | 2,007 | 9,318 | 2,364 |
| % change | -63% | -46% | -30% |

As with cycle counts, the percentage decreases (particularly in the morning peak) in absolute counts show that overall decreases in counts are higher than the headline 26% average reduction across all sites. **These larger decreases are driven by some large reductions in city centre locations.**

The chart below shows the total pedestrians recorded across all Vivacity Sensors, including a timeline of key events.

Figure 5: Total daily pedestrian counts in Cambridge City, 1st March- April 7th



As well as pedestrian counts derived from Vivacity sensors, **footfall data from key retail locations across the Cambridge BID area**. Analysis showed that there has been a **reduction in average daily footfall in retail locations of 80%¹²** between 15/03/2020 and 19/04/2020 compared to 06/01/2020 and 15/03/2020.

Table 12 shows the changes by individual location, of which all show a large reduction of 75% or above. The largest decrease is on Rose Crescent (-87%), which is a shopping lane in the City Centre.

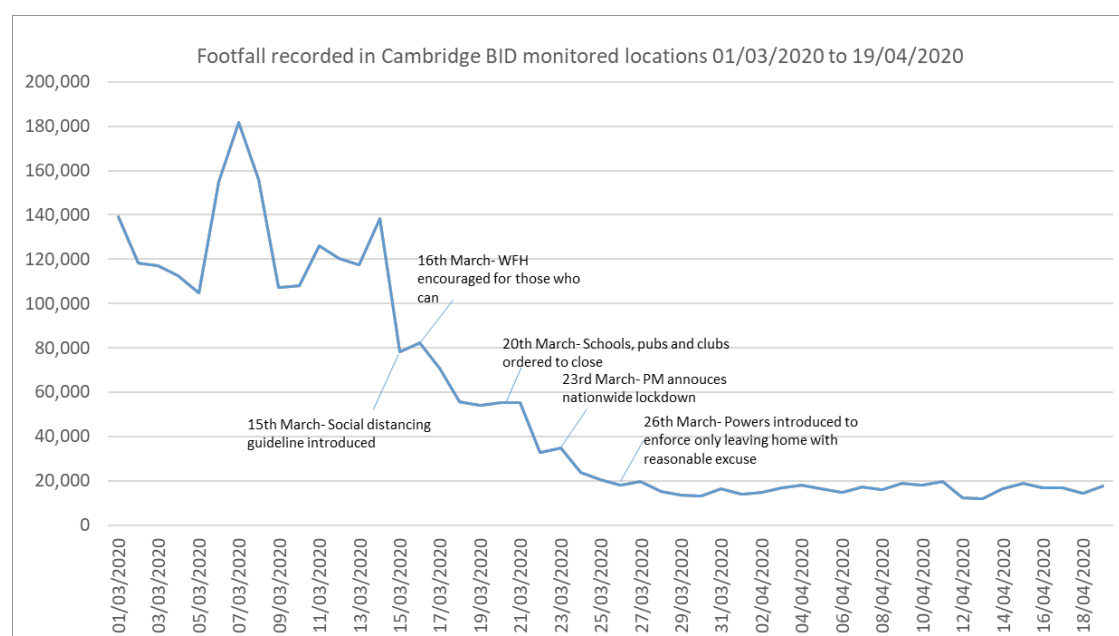
¹² Cambridge BID Footfall Data

Table 12: % change in daily average footfall between 16/03/2020-19/04/2020 compared to 06/01/2020-15/03/2020

| Location | Footfall |
|----------------|----------|
| Bridge St | -78% |
| Fitzroy St | -69% |
| Kings Parade | -83% |
| Market Hill | -75% |
| Station Square | -85% |
| Regent St | -86% |
| Rose Crescent | -87% |
| Sydney St | -81% |
| Average of All | -80% |

The chart below shows daily footfall recorded across the 8 locations from 01st March to 19th April, including a timeline of key events.

Figure 6: Total daily footfall counts in Cambridge BID area



Public Transport

Since social distancing measures were introduced, **overall commercial bus routes have been reduced.**¹³

Patronage on commercial bus routes has reduced significantly against levels prior to social-distancing measures.

Recorded Bus Counts

In order to monitor the reduction in services over time, bus counts from road traffic sensors/counters will be monitored. Comparisons have been carried out between the following two periods:

- *Before social distancing measures: Monday 6th January to Sunday 15th March*
- *During social distancing measures: Monday 16th March- Sunday 19th April*

Table 12, below, shows the percentage difference in recorded bus counts from sensors [Appendix D] on **key locations in Cambridge City** between the two periods. **Across all monitored locations, bus counts have seen an average reduction of 41%.**

There is some variation in reductions when looking across the individual locations- this is likely due to reductions in individual services and the specific locations of sensors/counters.

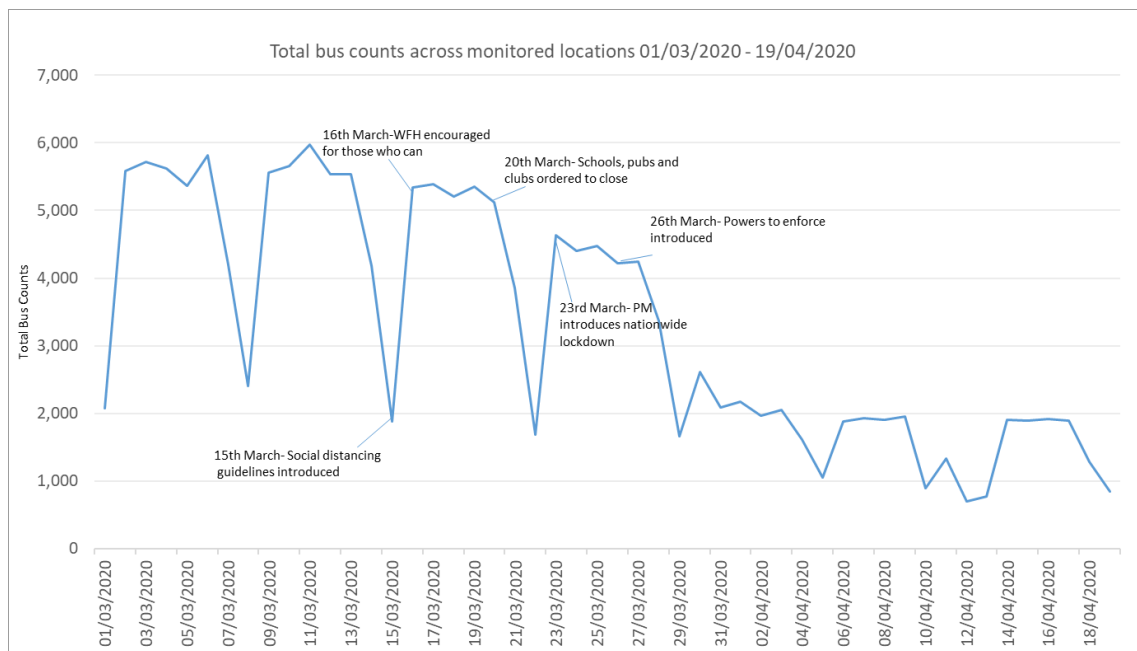
Table 13: % Difference in daily average bus counts between 06/01/2020-15/04/2020 and 16/03/2020- 19/04/2020 by individual key sensor locations

| Location | % difference in recorded bus counts |
|-------------------------------------|-------------------------------------|
| Mill Road (nr Brookfields Hospital) | -49% |
| Mill Road (nr Parkers Piece) | -53% |
| Coldhams Lane | -55% |
| East Road | -63% |
| Hills Road (nr Long Rd) | -42% |
| Hills Road (nr Leisure Park) | -47% |
| Newmarket Road | -51% |
| Milton Road (nr Kings Hedges Rd) | -40% |
| Milton Road (nr Gilbert Rd) | -35% |
| Histon Road (nr Kings Hedges Rd) | -36% |
| Histon Road (nr Victoria Rd) | -61% |

The chart below shows the total buses recorded across all monitored locations [Appendix F] **from 1st March to 19th April, including a timeline of key events.**

¹³ Update provided by Cambridgeshire County Council Public Transport Team

Figure 7: Total daily buses recorded in monitored locations [Appendix F] between 1st March and 19th April 2020



Journey Times

In order to understand the impact of social distancing measure on journey times on key routes in Cambridge, **Real Time Passenger Information has been used to look at the changes in drive time of buses on key routes.** The sections of these routes have been chosen using the [Smart Cambridge Monitored Traffic Zones](#). The closest stops to the edge of the zones have been used as start and end points for the journey and where there are gaps in the zones, these have been joined up to provide a continuous route.

Table 14 shows the change in bus drive time on key corridors on Monday to Friday between 16/03/2020 and 19/04/2020 compared to between 06/01/2020 and 15/03/2020. The percentage change is calculated as an **average across selected services** for each corridor to provide an **estimated overall change in journey time.**

Across all of the listed corridors, there has been an **estimated overall reduction in bus drive time of 27%, averaged across inbound and outbound journeys.** Inbound journeys have shown a greater decrease in drive time during the lockdown, 29%, compared to 25% for outbound journeys.

Hills Road has had the largest reduction in drive time of 34% averaged across inbound and outbound journeys. Huntingdon Road and Newmarket Road have both seen much smaller overall reductions in drive time of 18% and 22% respectively.

Table 14: % change in bus drive time on selected routes between 16/03/2020-19/04/2020 compared to 06/01/2020-15/03/2020

| Corridor | Change in Drive Time- Inbound (%) | Change in Drive Time- Outbound (%) | Average change in drive time of both directions (%) |
|---------------------------------|-----------------------------------|------------------------------------|---|
| Hills Road | -31 | -38 | -34 |
| Histon Road | -28 | -32 | -30 |
| Milton Road | -29 | -30 | -30 |
| Huntingdon Road | -25 | -10 | -18 |
| Madingley Road | -35 | -21 | -28 |
| Newmarket Road | -24 | -21 | -22 |
| Average of all corridors | -29% | -25% | -27% |

Economic and Business- Headline

Claimant Counts

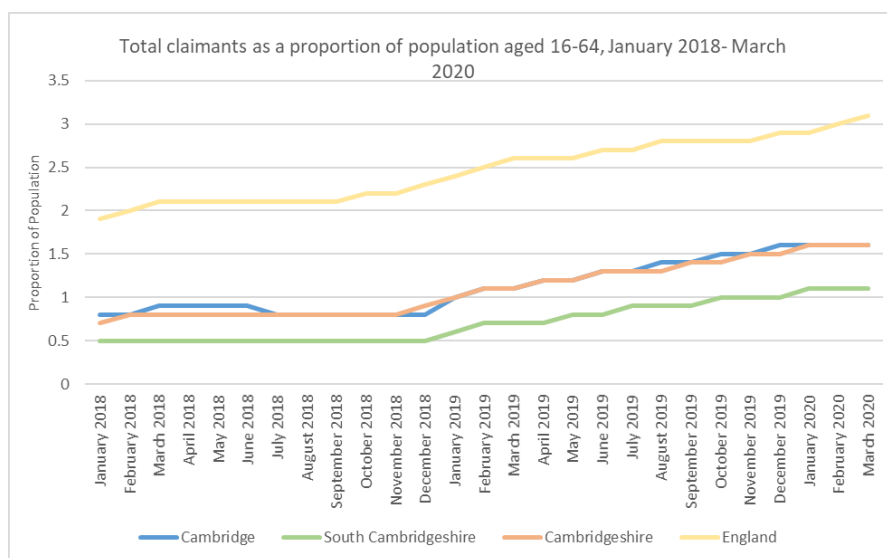
The Claimant Count¹⁴ measures the number of people claiming benefit principally for the reason of being unemployed. Since April 2015, the Claimant Count now includes all Universal Credit claimants who are required to seek work and be available for work, as well as all Job Seeker Allowance claimants (the number of people claiming Jobseeker's Allowance and National Insurance credits at Jobcentre Plus local offices).

The latest available data presented covers the period prior to the implementation of the coronavirus (COVID-19) social distancing measures - a baseline. The claimant counts are accurate to the second Thursday of the reference month and so the below data is based on the situation on March 12th 2020.

Current Claimant Counts

The figure below shows the number of claimants in Cambridge and South Cambridgeshire as a percentage of the population aged 16-64 (working age), sourced from the mid-year population estimates, by month. This shows that claimant rates in both district areas are lower than the national rate. There was a steady increase in the proportion of claimants in both districts though in 2019, with the rate in Cambridge City higher than South Cambridgeshire and more in line with the county-wide (Cambridgeshire) rate.

Figure 8: Total claimant count in Cambridge and South Cambridgeshire by month, compared to national and county-wide proportions



¹⁴ Note: We use data on claimants rather than unemployed numbers because – although the numbers are lower – they are more up to date, and therefore we expect it to show us any COVID19 impacts sooner. The claimant count data is based on the **actual number of people claiming benefits**, rather than a sample survey. This means the claimant count figures are not subject to any survey based error and are able to be **reported on more accurately monthly rather than quarterly** (unlike unemployment). It is however, a narrower measure of unemployment, and as such does not cover all unemployed people. Next 2020 publication dates: 19 May / 16 June / 16 July / 11 August / 15 September.

The above chart will be updated monthly to reflect the latest data counts released.

Monitoring Future Claimant Counts

Over the next few months, it is expected the claimant count data will show a rise in the number of people claiming benefits as a result of the impact of Covid-19.

Cambridgeshire County Council Business Intelligence Research Team will monitor the monthly ONS release over the coming months. This will allow the graphs to update and show any trends relating to Covid-19. Using 2018 and 2019 data, it is possible to develop a reference baseline over which the effects can be compared to 'normal'.

Appendix A; Google Mobility

Google have prepared [community mobility data reports](#) to help local understanding of responses to social distancing guidance related to COVID-19. Data is only released at an upper-tier authority (Cambridgeshire) level.

Location accuracy and the understanding of categorised places varies from region to region, so Google do not recommend using this data to compare changes between countries, or between regions with different characteristics (e.g. rural versus urban areas).

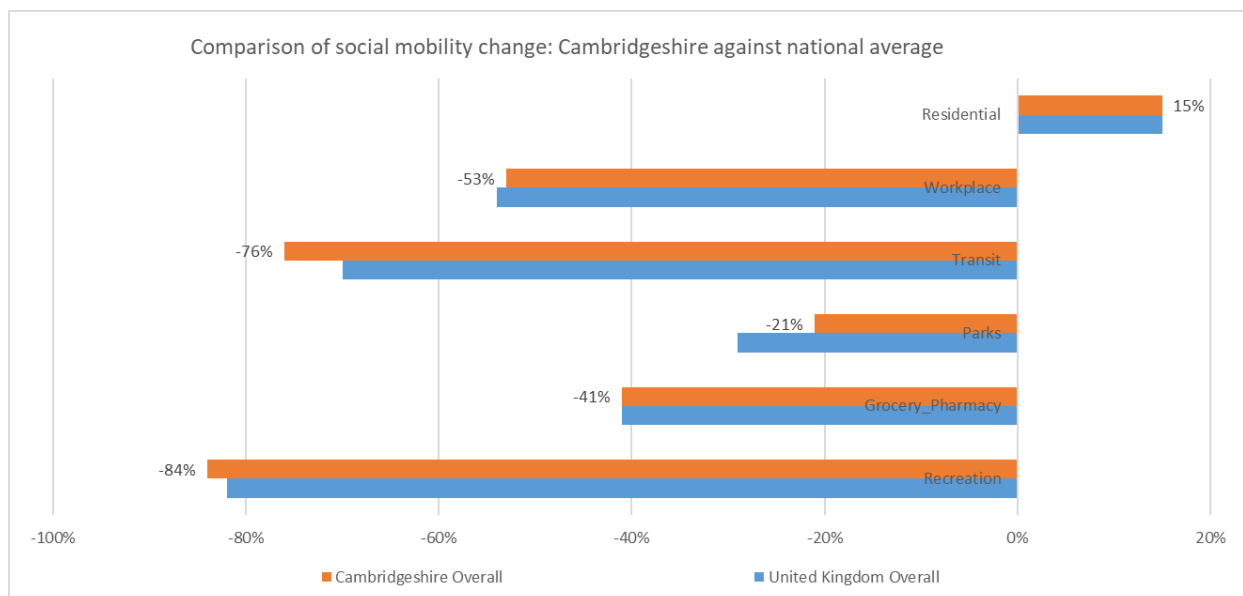
This data has only been released at upper-tier authority level **but provides useful local context to a national dataset** that has been incorporated into daily government briefings.

The categorised places included within the data release are:

- **Retail & recreation:** Mobility trends for places like restaurants, cafes, shopping centres, theme parks, museums, libraries, and movie theatres
- **Grocery & pharmacy:** Mobility trends for places like grocery markets, food warehouses, farmers markets, specialty food shops, drug stores, and pharmacies.
- **Parks:** Mobility trends for places like national parks, public beaches, marinas, dog parks, plazas, and public gardens.
- **Transit stations:** Mobility trends for places like public transport hubs such as subway, bus, and train stations.
- **Workplaces:** Mobility trends for places of work.
- **Residential:** Mobility trends for places of residence.

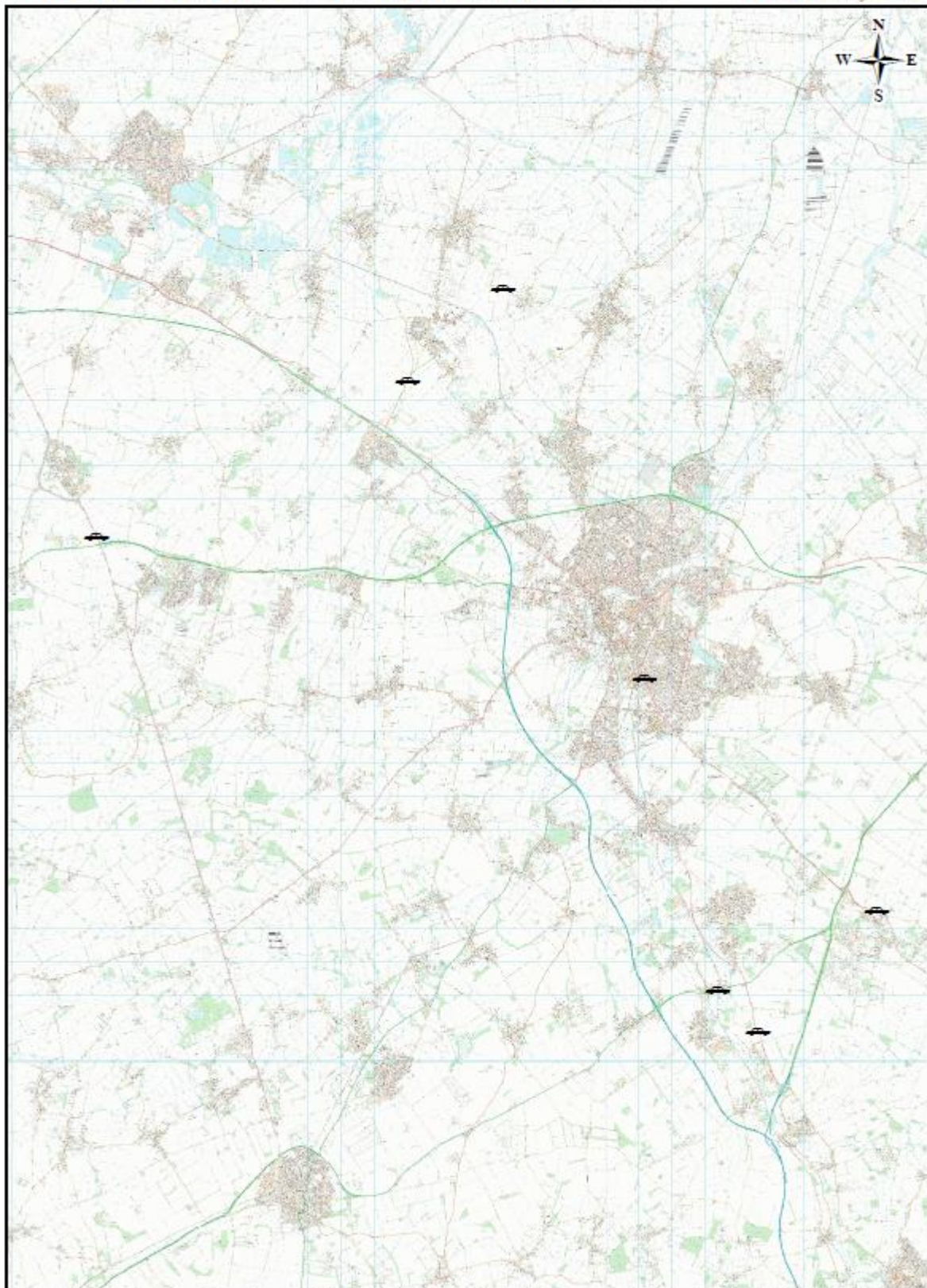
Cambridgeshire **google mobility trends have been largely in line with the national averages** across each of the key area types. There have been larger comparative decreases in mobility to **Transit hubs (-76% v -70%)** and a smaller decrease in mobility to **Parks (-21% v -29%)**

Figure 1: Cambridgeshire google mobility trends (as of 05/04/2020) when compared to overall national average (as of 05/04/2020)



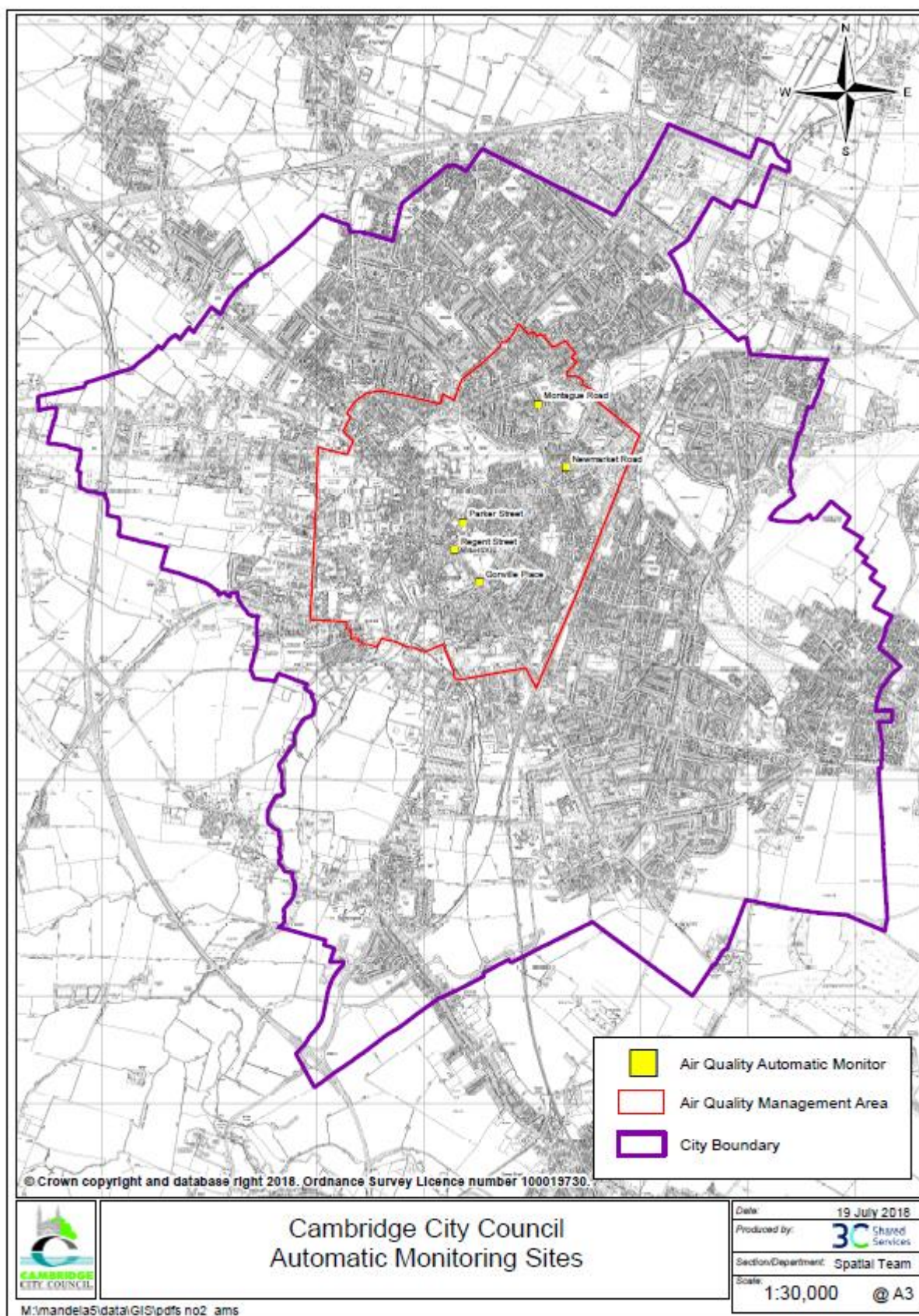
Appendix B: Map of **Automatic Vehicle Counters** in Cambridge City and South Cambridgeshire

Cambridge and South Cambridgeshire Vehicle ATCs

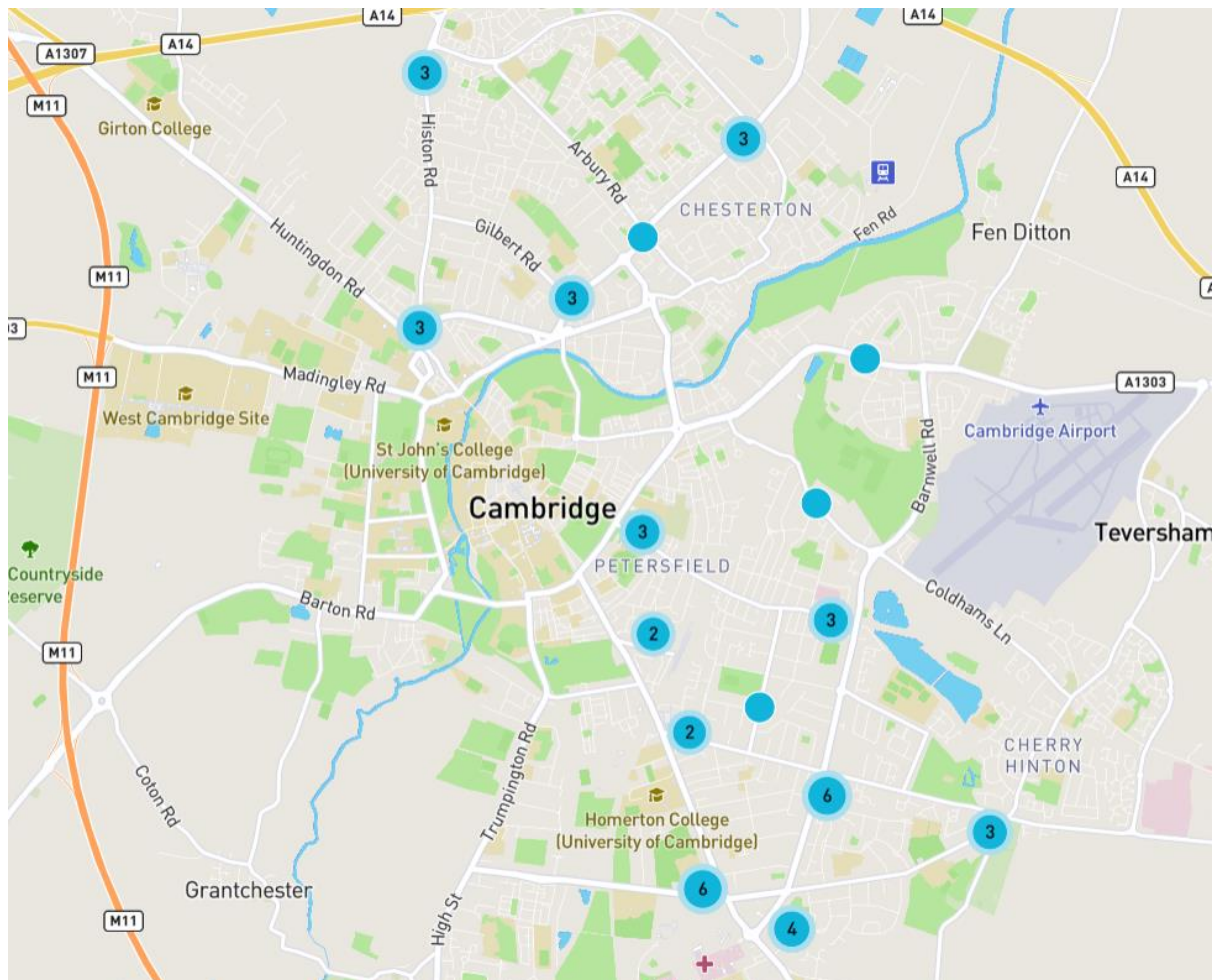


Scale (at A4): 1:114629 Centred at: 541424,257118 Date: 29/04/2020 © Crown copyright and database rights 2020 OS 100023205

Appendix C: Cambridge City Council Continuous Air Quality Monitoring Sites



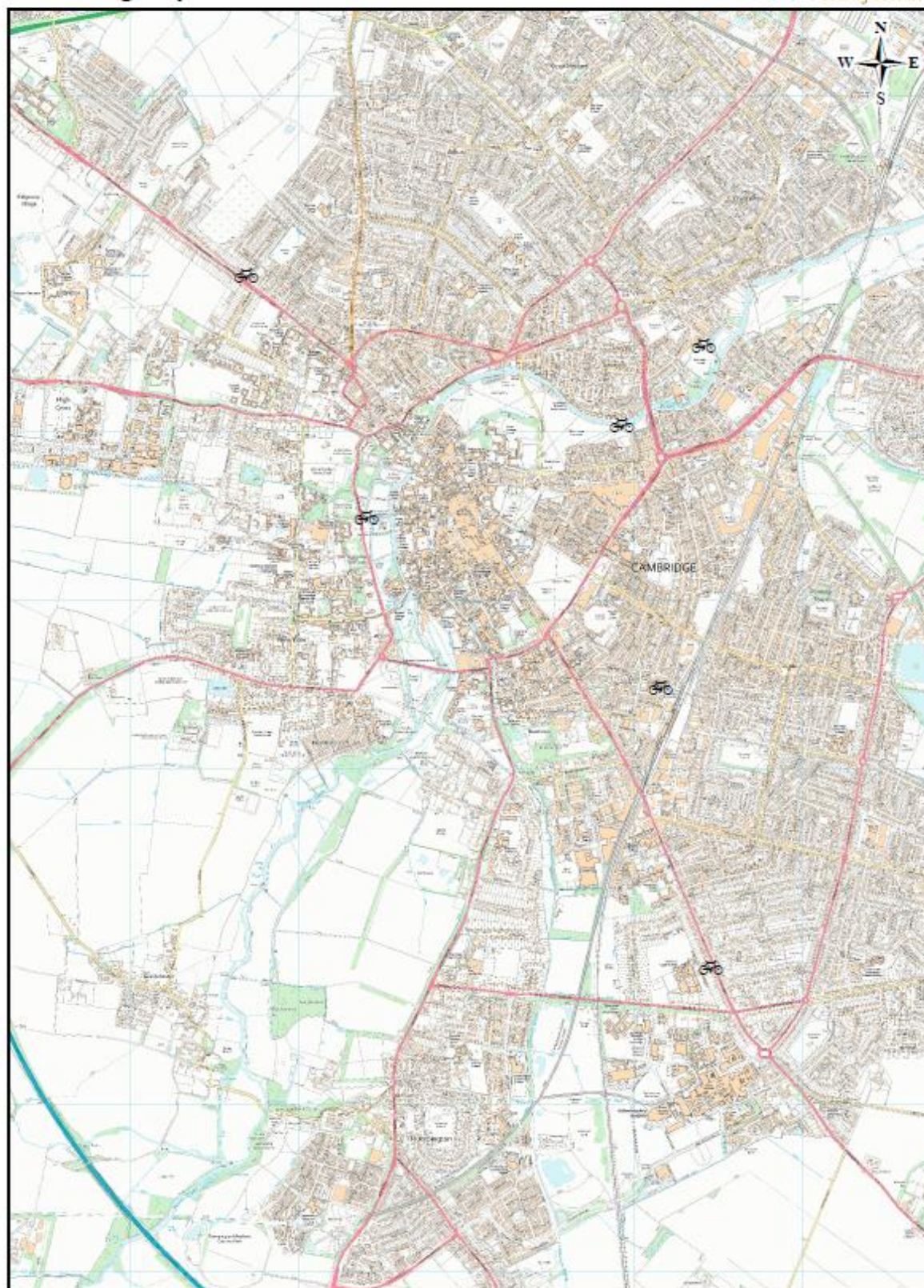
Appendix D: Location of existing Vivacity Labs Smart Traffic and Pedestrian Sensors*



*Note: The numbers represent individual count lines rather than sensor location.

Appendix E: A Map of **Automatic Cycle Counters** in Cambridge City

Cambridge Cycle ATCs



Scale (at A4): 1:41085 Centred at: 545029,257696 Date: 29/04/2020 © Crown copyright and database rights 2020 OS 100023205

Appendix F: List of Vehicle ATCs and Sensors used for motor vehicle traffic monitoring

| Monitor Type | Location |
|-------------------------------------|-------------------------|
| Permanent Automatic Vehicle Counter | A1198 Ermine St |
| | Hattons Rd, Longstanton |
| | High St, Rampton |
| | A505 Duxford |
| | A1301 Hinxton |
| | A1307 Little Abington |
| | Hills Rd |
| Vivacity Labs Smart Sensor | Mill Rd 1 |
| | Mill Rd 2 |
| | Vinery Rd |
| | Coldhams Lane |
| | Cherry Hinton |
| | East Rd |
| | Milton Rd |
| | Hills Rd |
| | Newmarket Rd |
| | Perne Rd |
| | Milton Rd 1 |
| | Milton Rd 2 |
| | Cambridge Rd |
| | Histon Rd |
| | Hills Rd |
| | Wulfstan Way |
| | Nightingale |
| | Long Rd |
| | Fendon Rd |
| | Mowbray Rd |
| | Queen Ediths Rd |

Appendix G: List of Cycle ATCs and Sensors used for **headline** cycle monitoring*

| Monitor Type | Location |
|-----------------------------------|-----------------------------|
| Permanent Automatic Cycle Counter | Beneath Cutter Ferry Bridge |
| | Riverside Bridge |
| | Carter Bridge |
| | Garret Hostel Lane |
| | Huntingdon Rd (inbound) |
| | Hills Rd (inbound) |
| Vivacity Labs Smart Sensor | Mill Rd 1 |
| | Mill Rd 2 |
| | Vinery Rd |
| | Coldhams Lane |
| | Cherry Hinton |
| | East Rd |
| | Devonshire Road |
| | Milton Rd |
| | Hills Rd |
| | Newmarket Rd |
| | Perne Rd |
| | Milton Rd 1 |
| | Milton Rd 2 |
| | Cambridge Rd |
| | Histon Rd |
| | Hills Rd |
| | Wulfstan Way |
| | Nightingale |
| | Long Rd |
| | Fendon Rd |
| | Mowbray Rd |
| | Queen Ediths Rd |

*only Vivacity sensors were used for total peak time analysis

Appendix H: List of Sensors used for pedestrian monitoring

| Monitor Type | Location |
|----------------------------|-----------------|
| Vivacity Labs Smart Sensor | Mill Rd 1 |
| | Mill Rd 2 |
| | Vinery Rd |
| | Coldhams Lane |
| | Cherry Hinton |
| | East Rd |
| | Devonshire Rd |
| | Milton Rd |
| | Hills Rd |
| | Newmarket Rd |
| | Perne Rd |
| | Milton Rd |
| | Milton Rd |
| | Cambridge Rd |
| | Histon Rd |
| | Hills Rd |
| | Wulfstan Way |
| | Nightingale |
| | Long Rd |
| | Fendon Rd |
| | Mowbray Rd |
| | Queen Ediths Rd |