



COVID-19 LOCAL AUTHORITY TRAVEL AND TRANSPORT DATA WEEKLY DIGEST

Week commencing 31st May 2021

INTRODUCTION

Since the imposition of travel restrictions designed to help dramatically reduce the spread of Covid-19, the Transport Technology Forum has led the collation of transport data from local authorities into information used to understand changes in travel behaviour.

Authorities from cities, towns and counties across England are sharing urban traffic control and automated traffic counter data from the roadside, as well as information on cycling and car parks. Industry has also supplied video analytics and floating vehicle data patterns. This sits alongside data the Department receives about rail and air, public transport, freight and maritime to summarise how, where and when people and goods are moving around the country.

The Transport Technology Forum can publish outcomes from this data set for interested parties, not least those bodies who went above and beyond the call to share their data with us.

ABOUT THE FORUM

This document has been prepared by Arup on behalf of the Transport Technology Forum (TTF) as part of its remit to drive more effective and efficient management of existing and new road networks, as a key national opportunity before, during and after the current COVID-19 emergency. Road transport will remain a key pillar of how people and goods move across the nation, not just on strategic roads. Improving road travel through technology is a core aim of the Forum. The Forum promotes a collaborative culture to open-up the opportunity and address the caution which has historically impeded efficiency and innovation.

ABOUT THIS REPORT

The report provides an ongoing snapshot of travel, summarising weekly, daily, and hourly changes based on information shared by:

- Traffic – 29 data providers, geographically covering approximately 107 local authority districts.
- Cycling – 16 data providers, geographically covering approximately 84 local authority districts including nationwide canal and river paths.
- Parking – 18 data providers, geographically covering more than 27 local authorities nationally.

This provides an overview of how public behaviour is changing and what new patterns are being experienced. Local Authorities can benefit by being able to compare what is happening in their areas with the national picture, allowing local and national comparisons to be drawn.

WEEKLY HIGHLIGHTS AND SUMMARY

Traffic

- Overall traffic has returned to the pre-pandemic baseline, with levels varying between 3% below the baseline to 3% above the baseline.
- The traffic profile is very similar to that seen during the second national lockdown. Despite the ease of lockdown restrictions, the profile is still more similar to the second national lockdown than to February 2020. This may be a consequence of long-term shifts in commuter patterns.
- Weekend traffic volumes follow a similar trend to the previous weeks, with a distinctive peak at approximately 13:00, as seen in Figure 3.2.
- The variation in traffic by vehicle type is shown in Figure 4.1 for weekday traffic and Figure 4.2. for weekend traffic. Car and bus usage have increased since the relaxation of restrictions on the 12th of April.
- Local authorities examined in further detail in this report include Birmingham, Derbyshire, Hampshire, Suffolk, City of York, and Leicestershire (excluding Leicester City). Across all local authorities (Figure 5.2), the traffic levels have increased following the lifting of lockdown restrictions.
- Figure 9 shows that traffic has on average reached a similar level to the second national lockdown.
- Figure 11 shows that Lockdown 3 weekday traffic volumes have clearly distinguishable AM and PM peaks, as opposed to Lockdown 1, which appears more neutral to the traditional peaks with a higher level of interpeak traffic.

Cycling

- As a result of good weather cycling levels have remained high (Figure 6). The trend indicates increased cycling towards the end of the week compared to the previous weeks.
- Weekday cycling for the week commencing 17th May has a more pronounced AM peak compared to the previous week (Figure 8.1). The peak remains earlier compared to the pre-pandemic baseline.
- The weekend cycling profile is similar to the previous two weeks (Figure 8.2).

Parking

- Parking data collected indicates an increase in the number of occupied spaces since the ease of lockdown restrictions. Figure 1 shows that since April 12th the afternoon car park occupancy has been rising steadily. Car park occupancy is higher in the afternoon compared to the morning.
- The number of captured incoming vehicles significantly increases around the easing of restrictions but returns to baselines shortly afterwards.
- Hourly counts indicate that the number of vehicles has increased to the pre-pandemic baseline over the last month.

1. CHANGE IN AVERAGE DAILY TRAFFIC FLOW OVER TIME

Compared to baseline (%)

Traffic levels return to the pre-pandemic baseline.

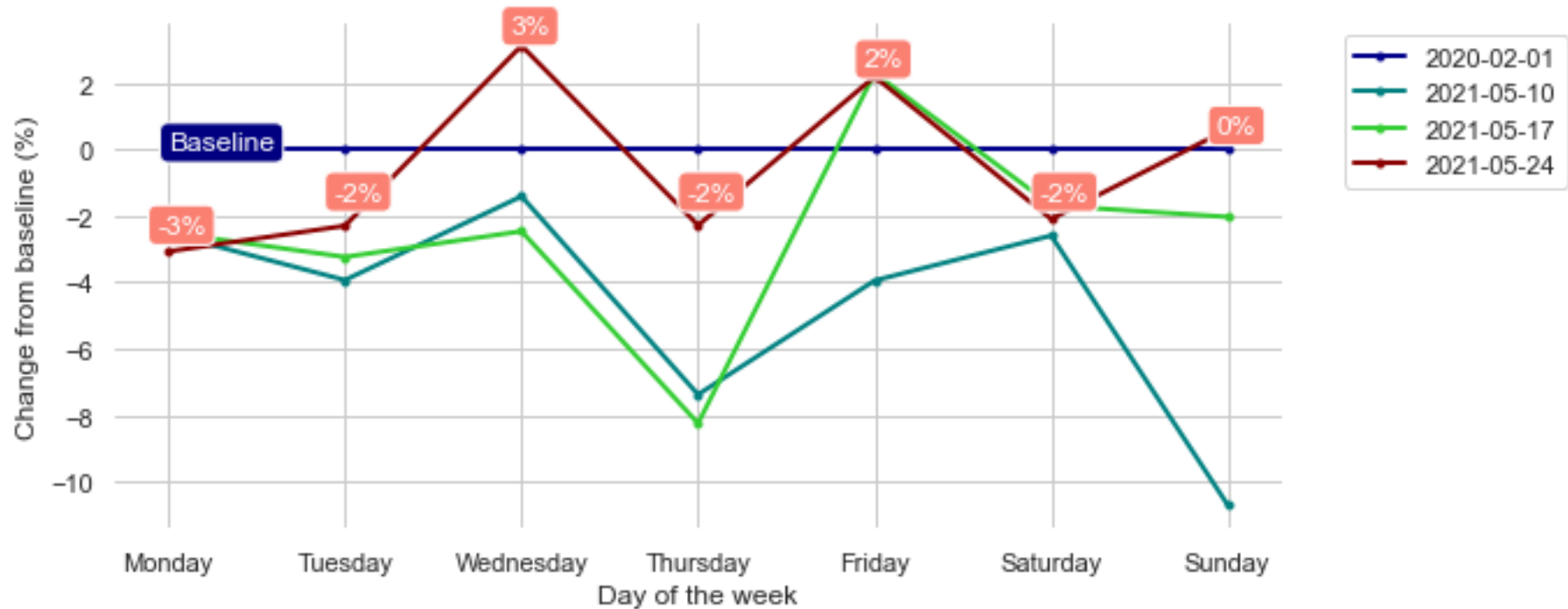


2. CHANGE IN AVERAGE DAILY TRAFFIC FLOW BY DAY OF WEEK

Compared to baseline (%)

Traffic volumes vary between 3% below the baseline to 3% above the baseline.

On average, the traffic can be considered to have returned to pre-pandemic levels.



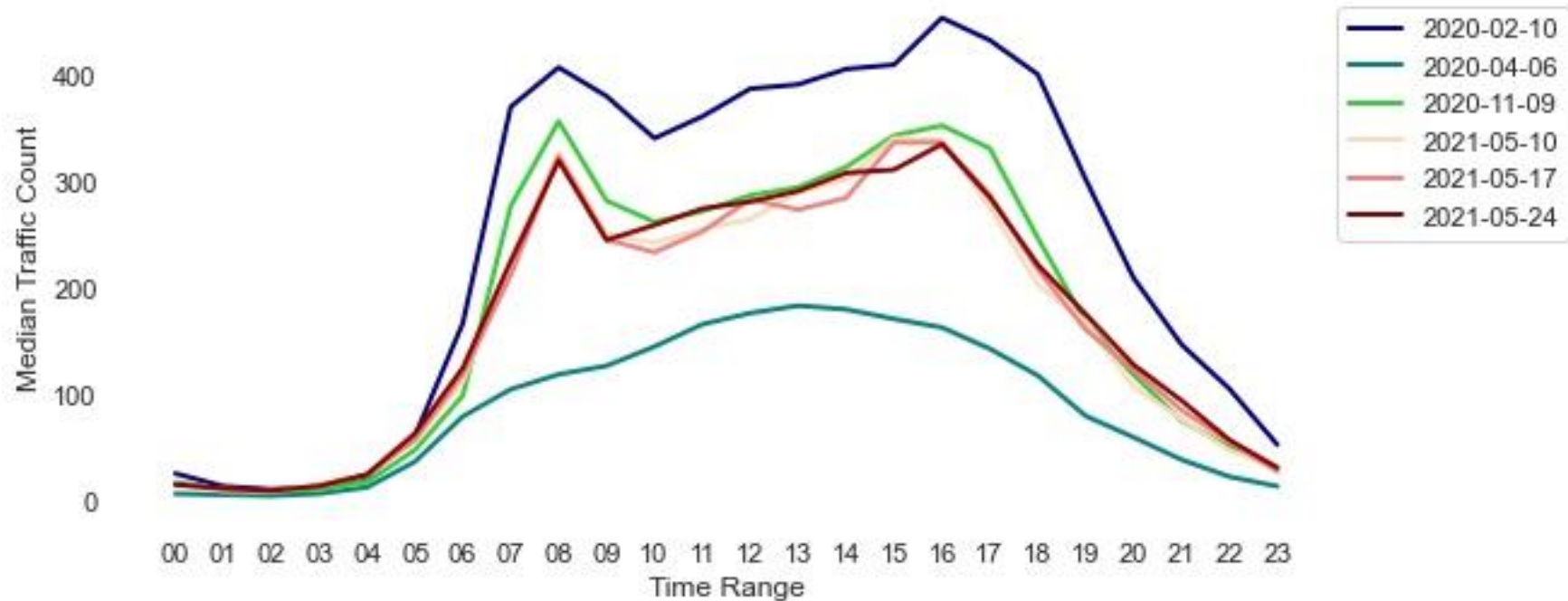
Average day of week traffic volumes compared to the baseline week (01/02/2020), and the 3 most recent weeks.

3.1. MEDIAN WEEKDAY TRAFFIC BY HOUR OF DAY

Hourly traffic counts

The shape of the traffic is yet to return to pre-pandemic shape.

The AM peak remains sharper compared to pre-pandemic, while the PM peak is less accentuated.

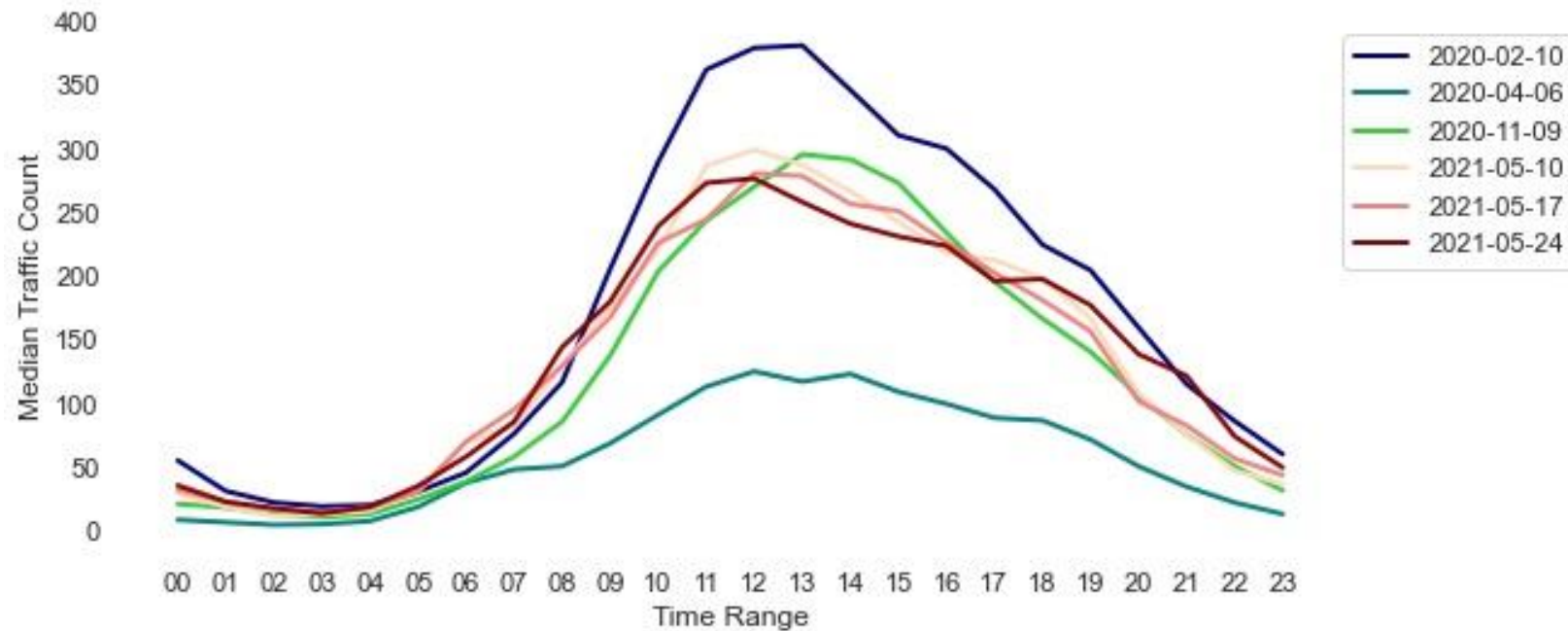


Weekday traffic volumes compared to a pre-pandemic week (10/02/20) and early lockdown (06/04/20) across all datasets. This graph uses the median traffic count for each hour of each weekday, as well as the median across all weekdays. This is different to what has been published in previous reports (before 15 March 2021), which made use of the sum of traffic counts for each hour of each weekday, and the average across all weekdays. Note, this graph should be used to compare the shape of the traffic rather than volumes.

3.2. MEDIAN WEEKEND TRAFFIC BY HOUR OF DAY

Hourly traffic counts

Weekend traffic has a similar pattern as the previous two weeks. There is a peak in weekend traffic around 13:00 in the afternoon.



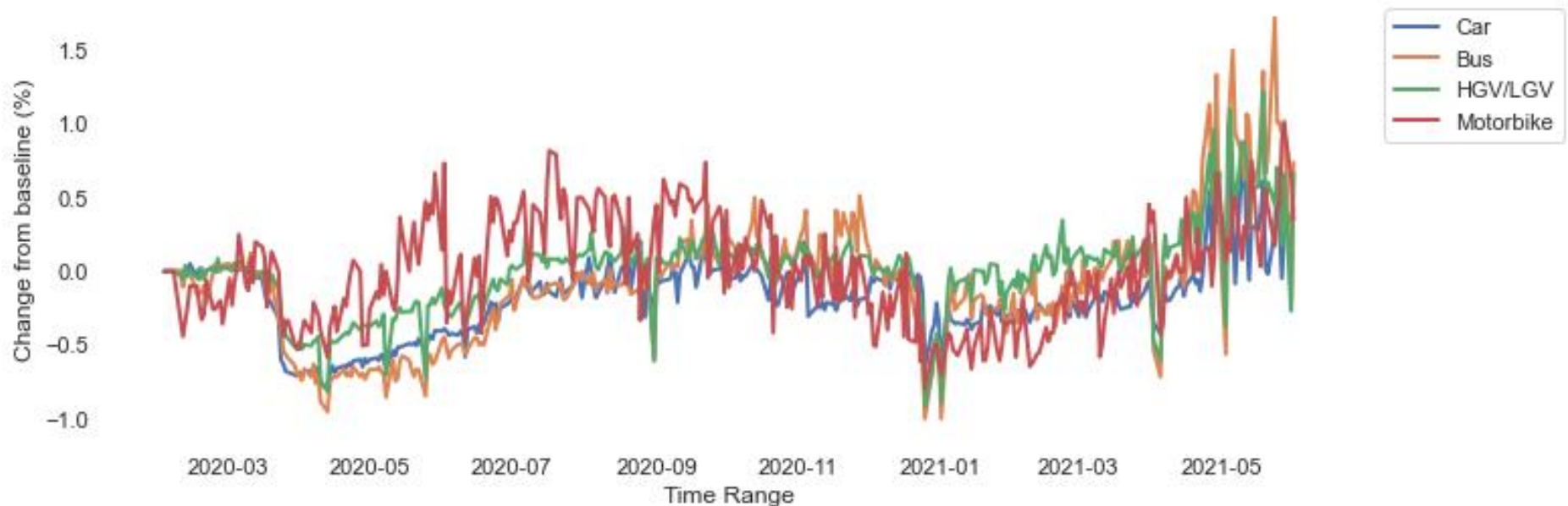
Weekday traffic volumes compared to a pre-pandemic week (10/02/20) and early lockdown (06/04/20) across all datasets. This graph uses the median traffic count for each hour of each weekday, as well as the median across all weekdays. This is different to what has been published in previous reports (before 15 March 2021), which made use of the sum of traffic counts for each hour of each weekday, and the average across all weekdays. Note, this graph should be used to compare the shape of the traffic rather than volumes.

4.1. CHANGE IN AVERAGE WEEKDAY TRAFFIC FLOW BY VEHICLE CLASS

Compared to baseline (%)

Overall bus counts have increased significantly in the past few weeks.

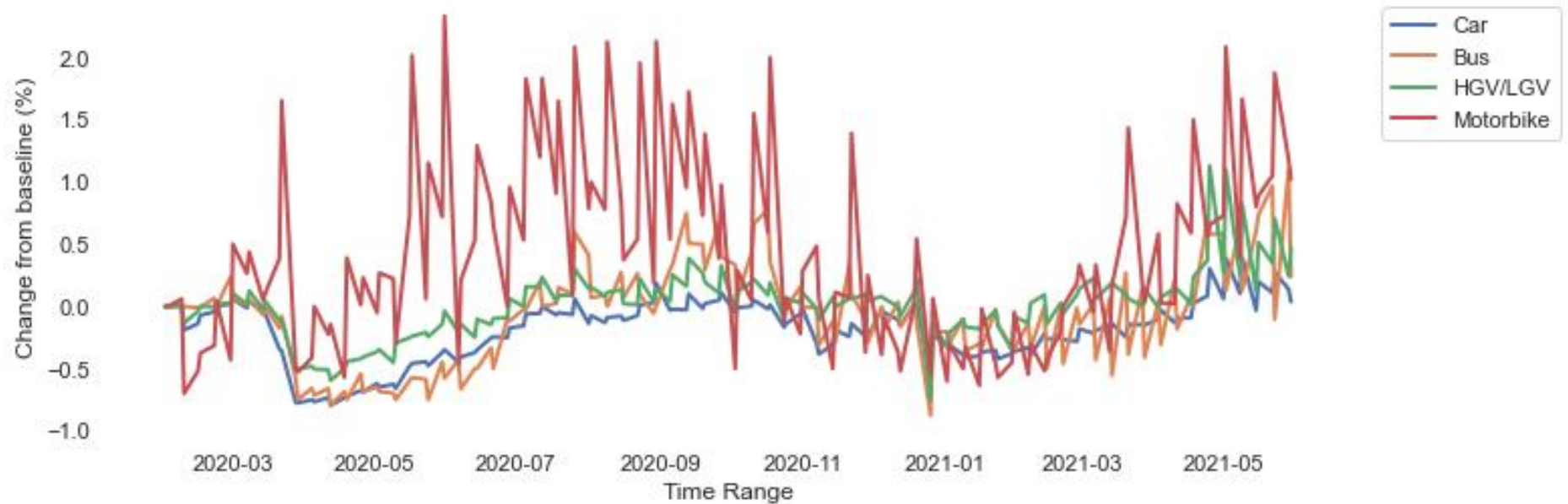
The upward trend is consistent across all modes of transport.



Change in average vehicle trips by vehicle class where available in the source dataset.

4.2. CHANGE IN AVERAGE WEEKEND TRAFFIC FLOW BY VEHICLE CLASS

Compared to baseline (%)



Change in average vehicle trips by vehicle class where available in the source dataset.

5.1. FOCUS ON LOCAL AUTHORITIES

Map of local authorities

Five local areas are examined that provide a good geographic spread.

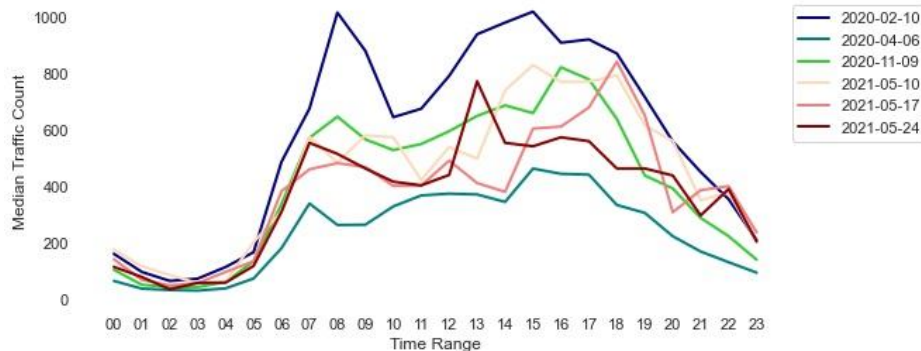


Data has been provided by: Birmingham City Council, City of York Council, Suffolk County Council, Hampshire Council, Derbyshire County Council, Leicestershire County Council (excludes Leicester City).

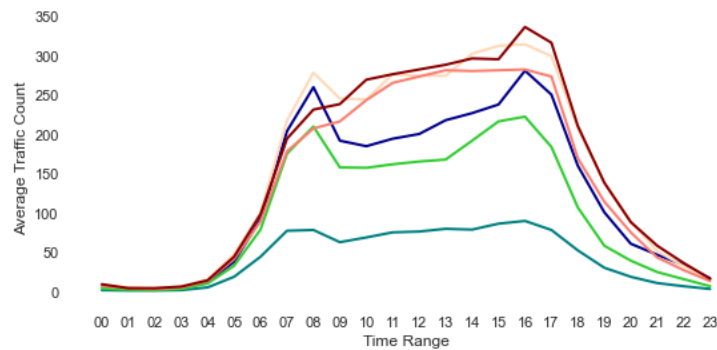
5.2. MEDIAN WEEKDAY TRAFFIC BY HOUR OF DAY FOR LOCAL AUTHORITIES

Hourly traffic counts

5.2.1. BIRMINGHAM



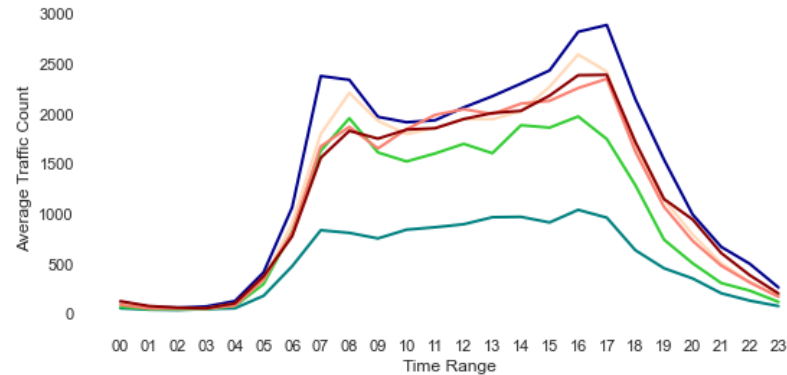
Traffic levels in Birmingham have levels below the pre-pandemic baseline, with overall levels similar to the previous week.



5.2.2. DERBYSHIRE

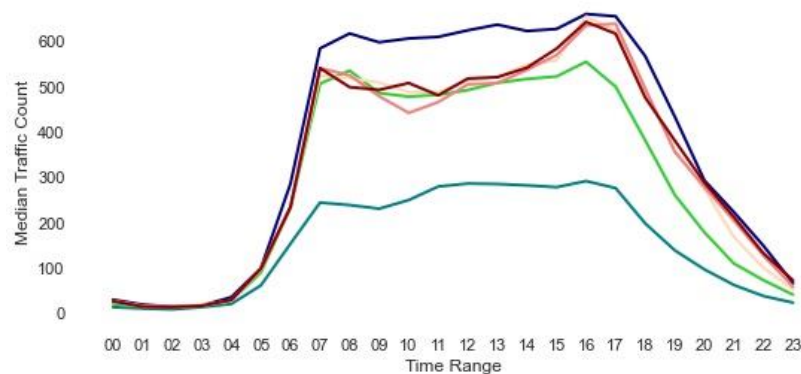
Traffic levels in Derbyshire now exceed the pre-pandemic baseline for the interpeak period. The AM peak is less pronounced, while the PM peak is more defined.

5.2.3. HAMPSHIRE



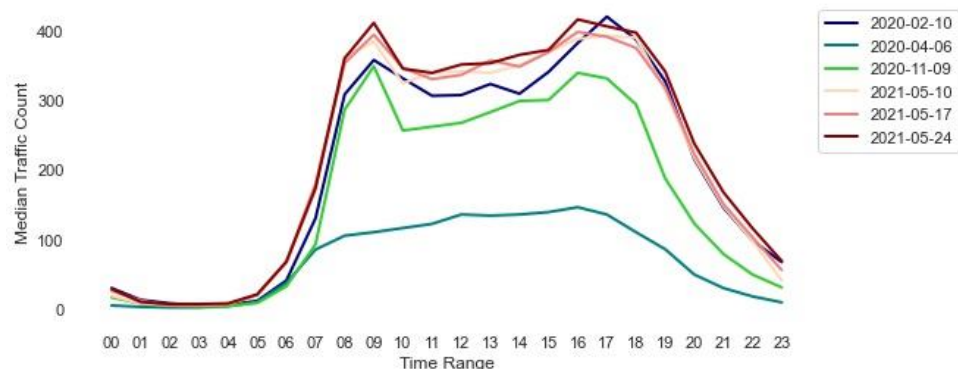
Traffic levels in Hampshire exceed those seen during the second national lockdown. There is a noticeable peak in traffic around 18:00 PM.

5.2.4. SUFFOLK



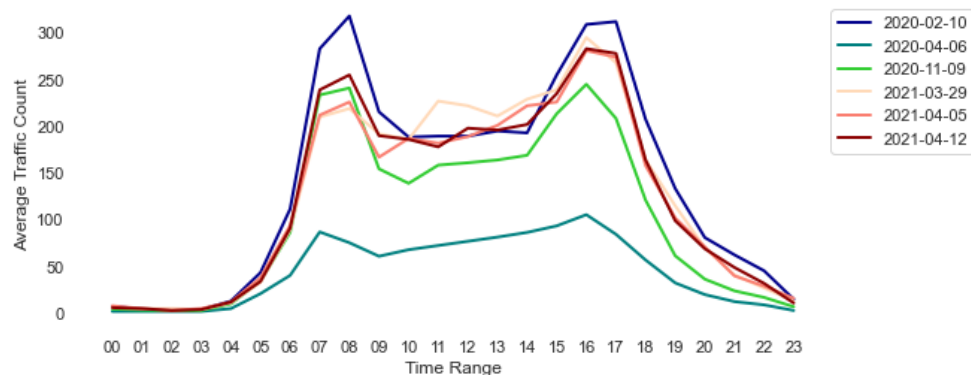
Traffic levels in Suffolk are exceeding those seen during the second national lockdown, especially during the PM peak. The overall traffic levels are yet to reach the pre-pandemic baseline.

5.2.5. CITY OF YORK



Traffic levels in the City of York remain above the pre-pandemic baseline. The AM peak follows a similar pattern compared to the previous weeks. The PM peak remains at an earlier time compared to the pre-pandemic baseline.

5.2.6. LEICESTERSHIRE (EXCEPT LEICESTER CITY)



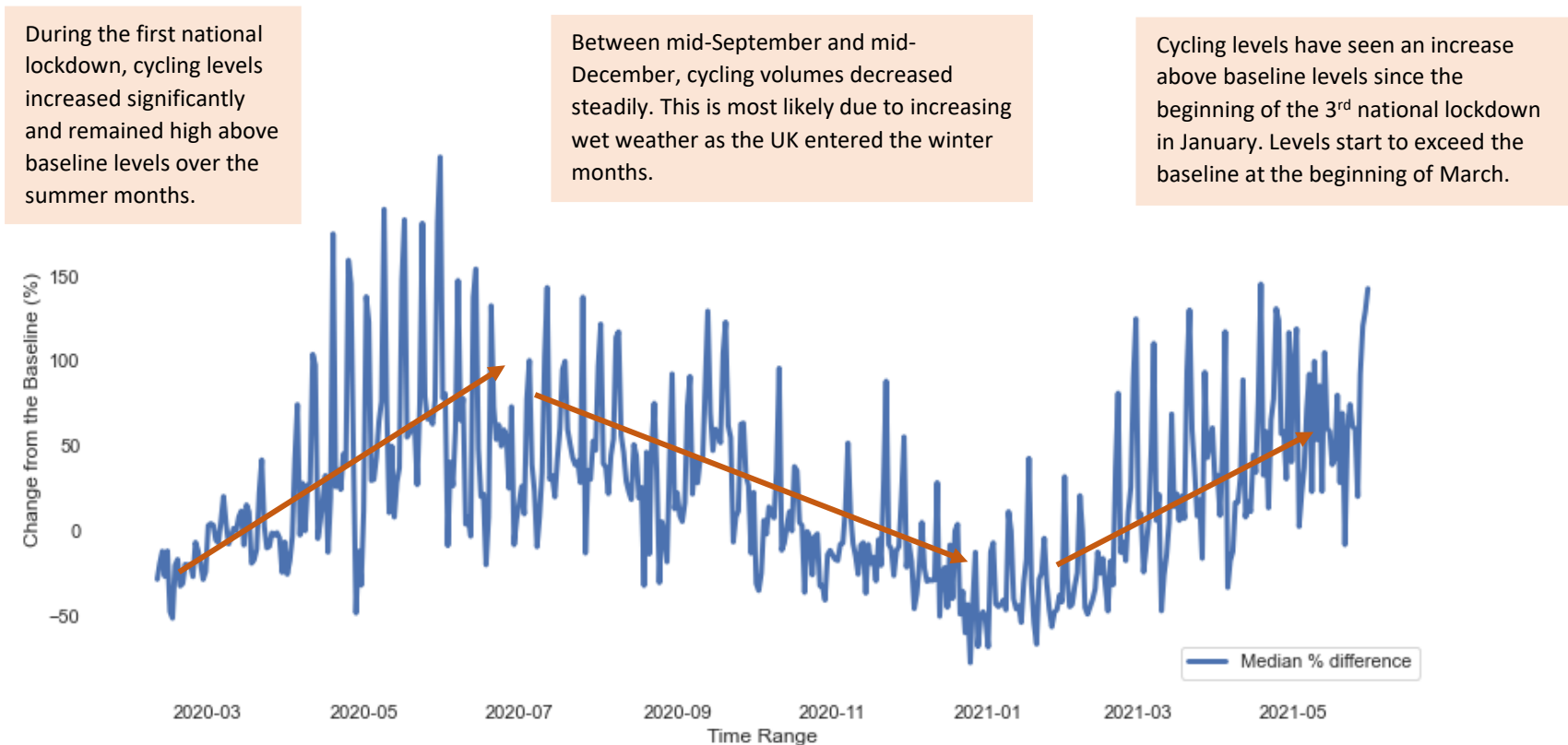
Traffic levels in Leicestershire are approaching the pre-pandemic baseline. The AM and PM peak follow a similar trend to the previous weeks.

Updated data for Leicestershire, Derbyshire and Hampshire could not be fetched for the w/c 19th of April. Historical data is presented for comparison.

6. CHANGE IN AVERAGE DAILY CYCLING FLOW

Compared to baseline (%)

Improved weather conditions have seen increased cycling levels in March 2021.



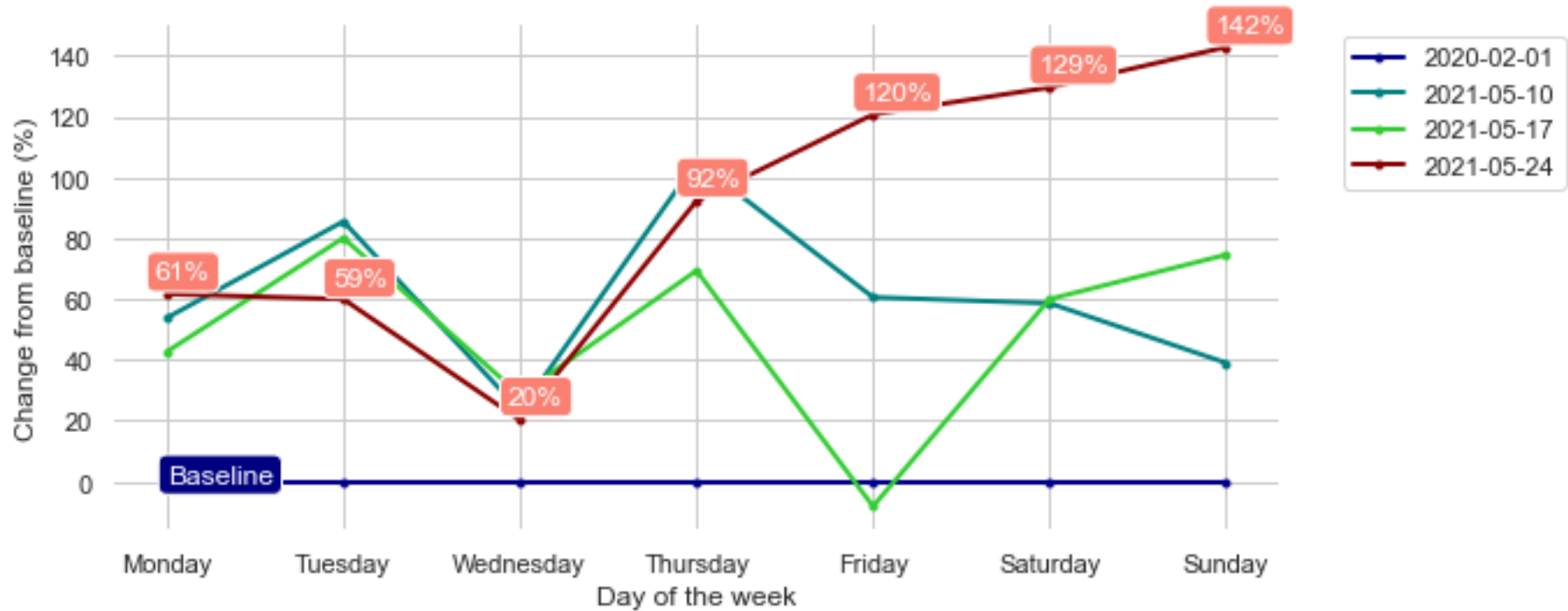
Change in average daily cycling volumes since 1st of March across all sources compared to the baseline (the first week of February 2020)

7. CHANGE IN AVERAGE DAILY CYCLING BY DAY OF WEEK

Compared to baseline (%)

Cycling levels are higher compared to the previous weeks.

The overall shape of cycling indicates increased cycling activity towards the end of the week.

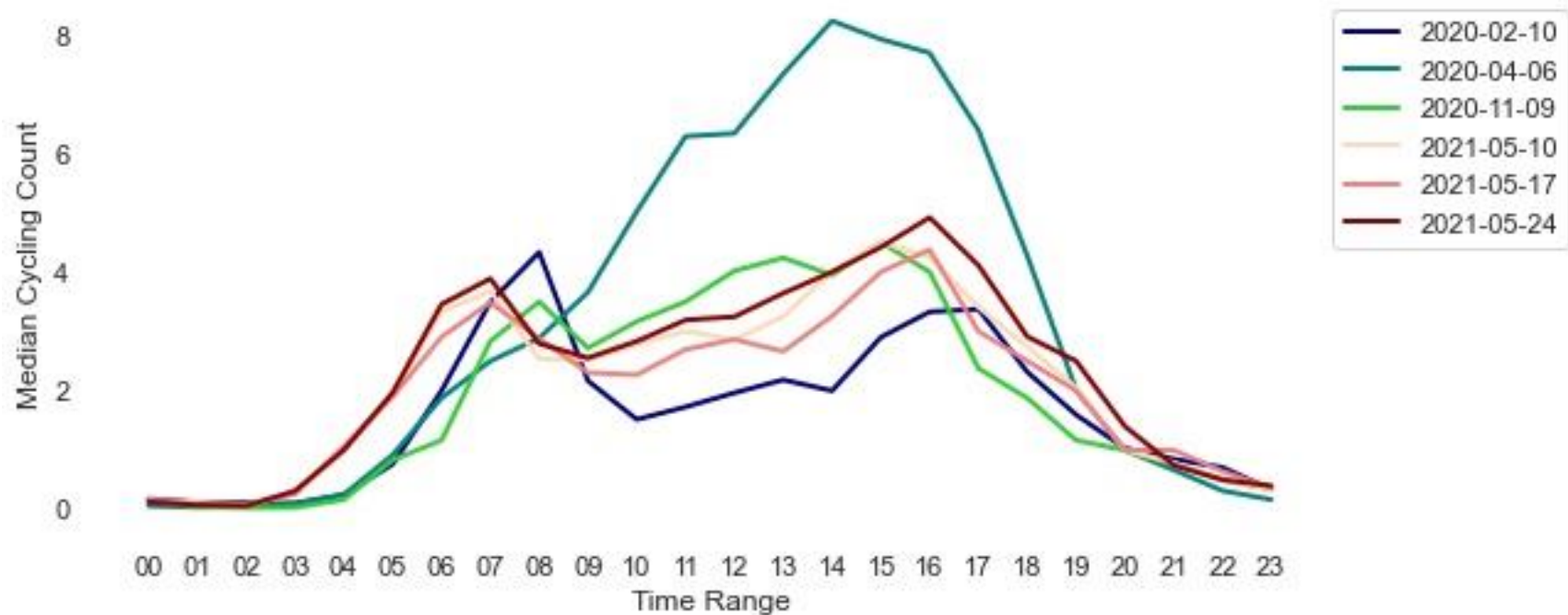


Average day of week traffic volumes compared to the baseline week (01/02/2020), and the 3 most recent weeks.

8.1 MEDIAN WEEKDAY CYCLING BY HOUR OF DAY

Hourly counts

The AM peak remains pronounced, however, PM peak now exceeds the levels seen in the morning. AM levels are above those seen pre-pandemic, whereas PM is far below the levels.

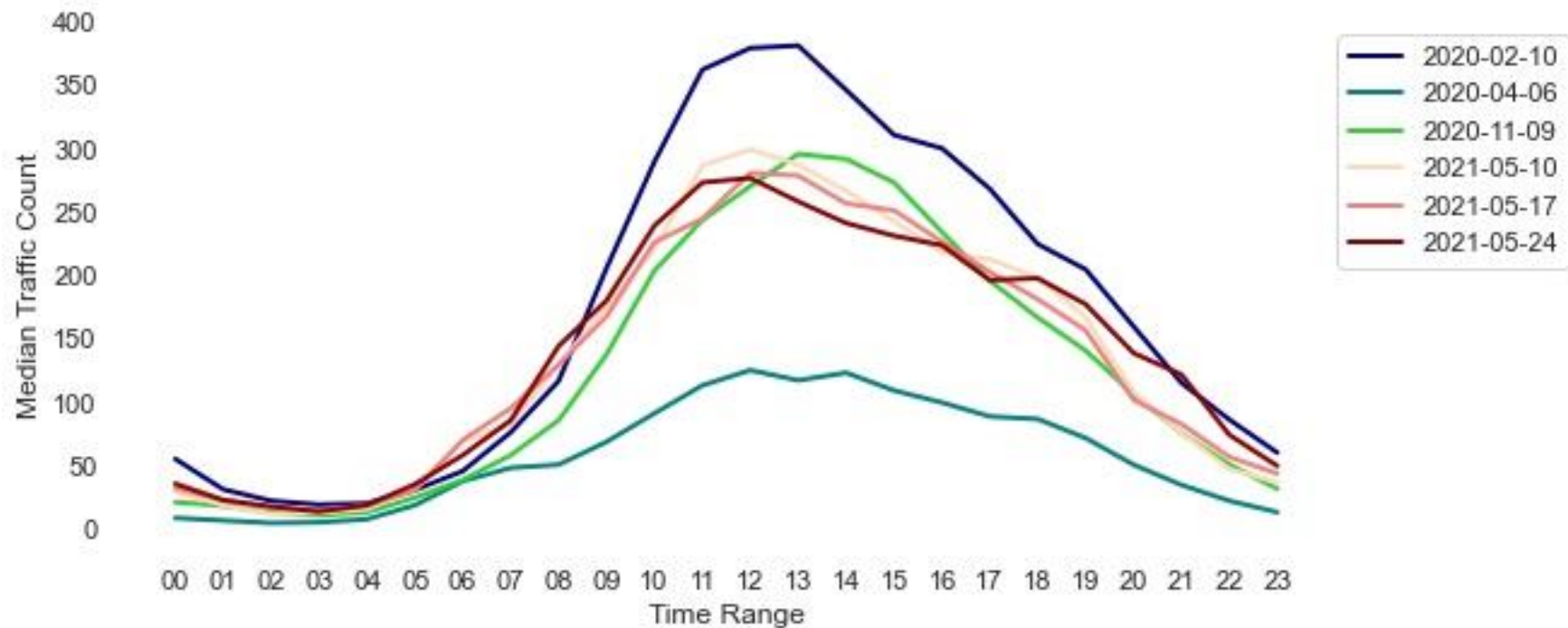


Weekday cycling volumes compared to a pre-pandemic week (10/02/20) and early lockdown (06/04/20) across all datasets. This graph uses the median cycling count for each hour of each weekday, as well as the median across all weekdays. This is different to what has been published in previous reports (before 15 March 2021), which made use of the sum of cycling counts for each hour of each weekday, and the average across all weekdays.

8.2 MEDIAN WEEKEND CYCLING BY HOUR OF DAY

Hourly counts

Weekend cycling follows a similar pattern to the previous two weeks

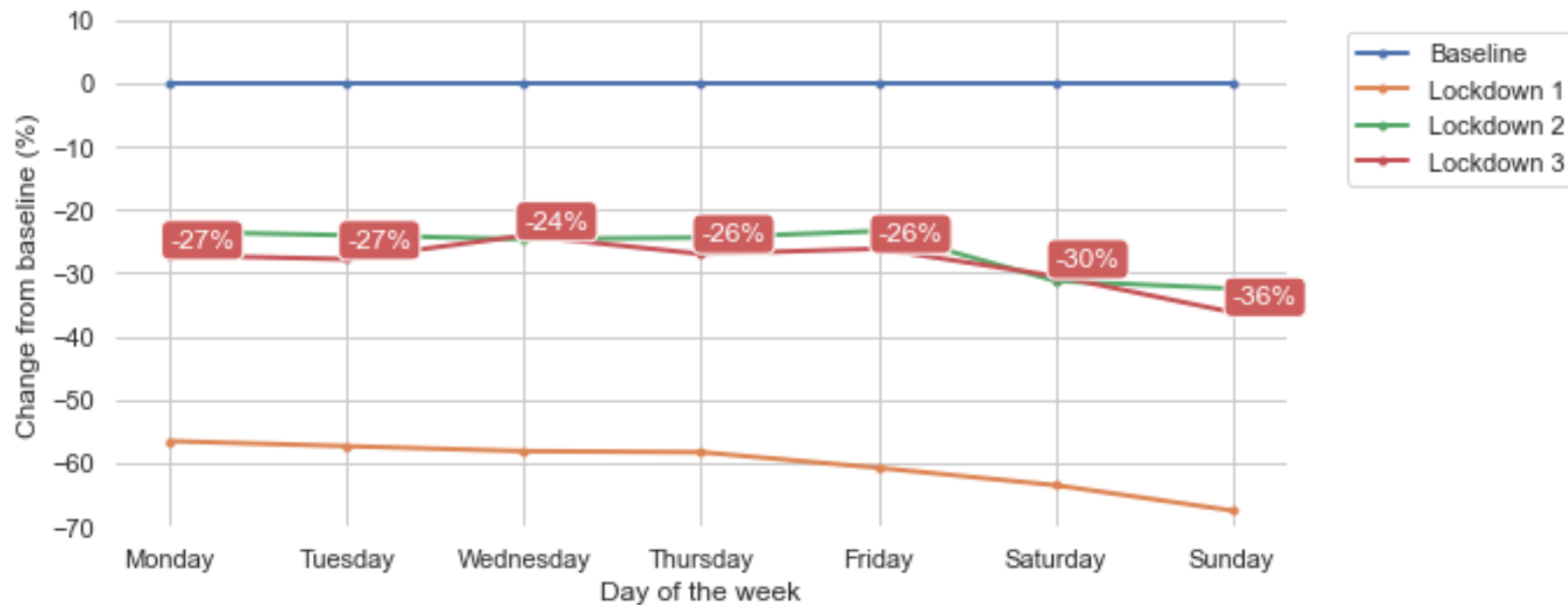


Weekend cycling volumes compared to a pre-pandemic week (10/02/20) and early lockdown (06/04/20) across all datasets. This graph uses the median cycling count for each hour of each weekend day, as well as the median across all weekend days. This is different to what has been published in previous reports (before 15 March 2021), which made use of the sum of cycling counts for each hour of each weekend day, and the average across all weekend days.

9. LOCKDOWN CHANGE IN AVERAGE DAILY TRAFFIC BY DAY OF WEEK

Compared to baseline (%)

Lockdown 3 averages are now at the same level as the lockdown 2.



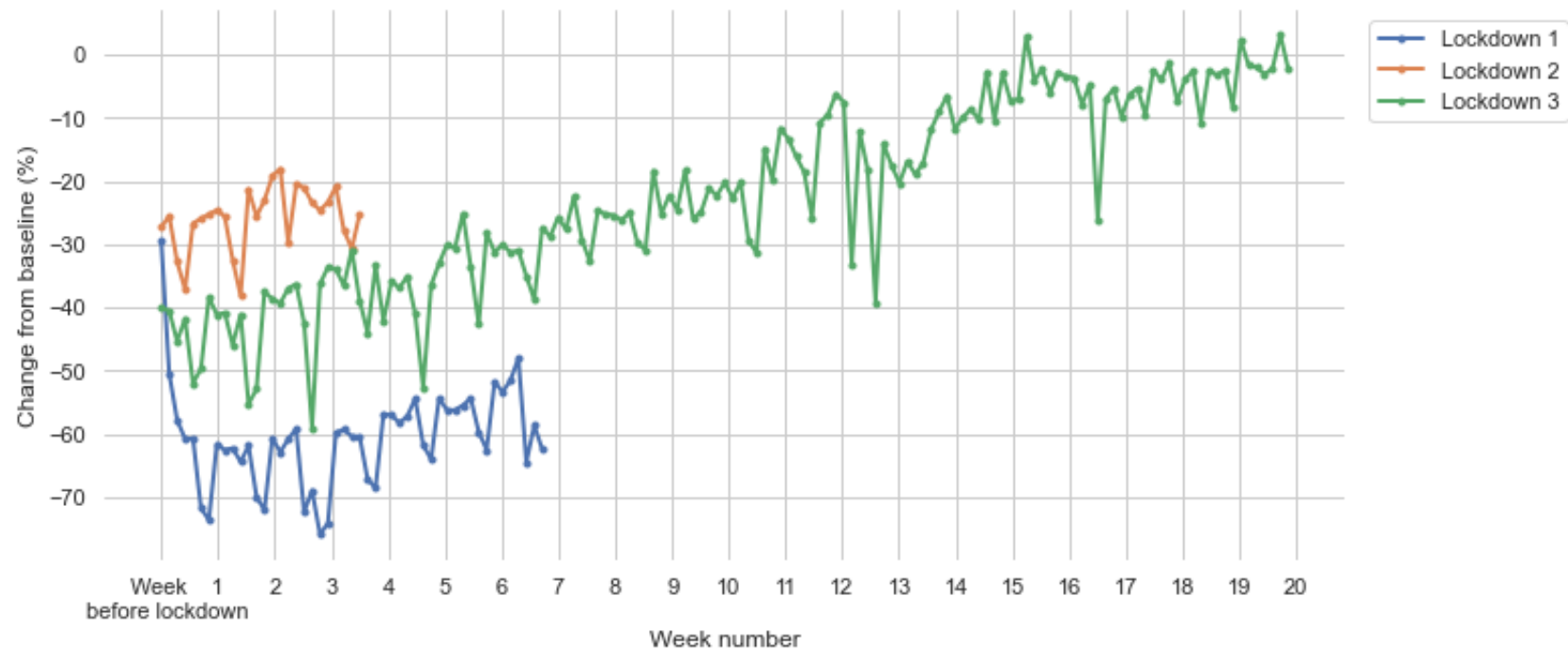
Comparing the average weekday median percentage change from the baseline for the first, second and third national lockdowns. It should be noted that at the time of writing, the third national lockdown was still ongoing and therefore only data between 05/01/21 and 28/05/21 has been included for lockdown 3.

10. LOCKDOWN PERCENTAGE CHANGE FROM BASELINE

Compared to baseline (%)

Lockdown 2 saw a surge in traffic immediately before the start of restrictions.

Lockdown 3 levels are now approaching the baseline.

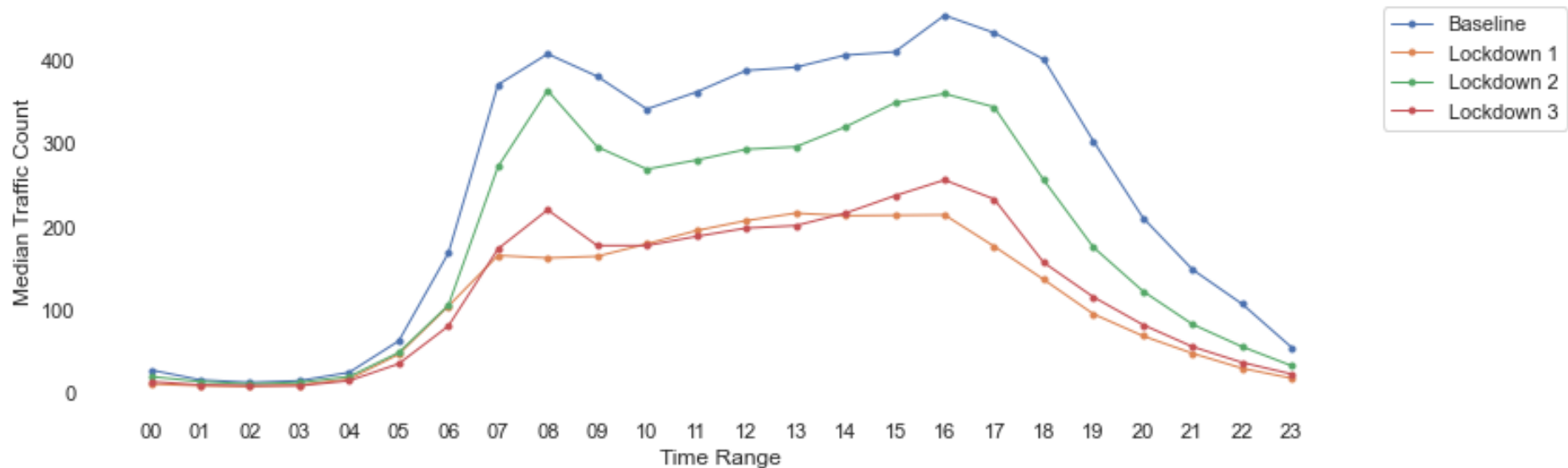


Comparing the median percentage change from the baseline for the first, second and third national lockdowns. It should be noted that at the time of writing, the third national lockdown was still ongoing and therefore only data between 05/01/21 and 28/05/21 has been included for lockdown 3.

11. LOCKDOWN MEDIAN WEEKDAY TRAFFIC BY HOUR OF DAY

Hourly Counts

Lockdown 3 has clearly distinguishable AM and PM peaks, as opposed to lockdown 1, which appears neutral to the traditional peaks.

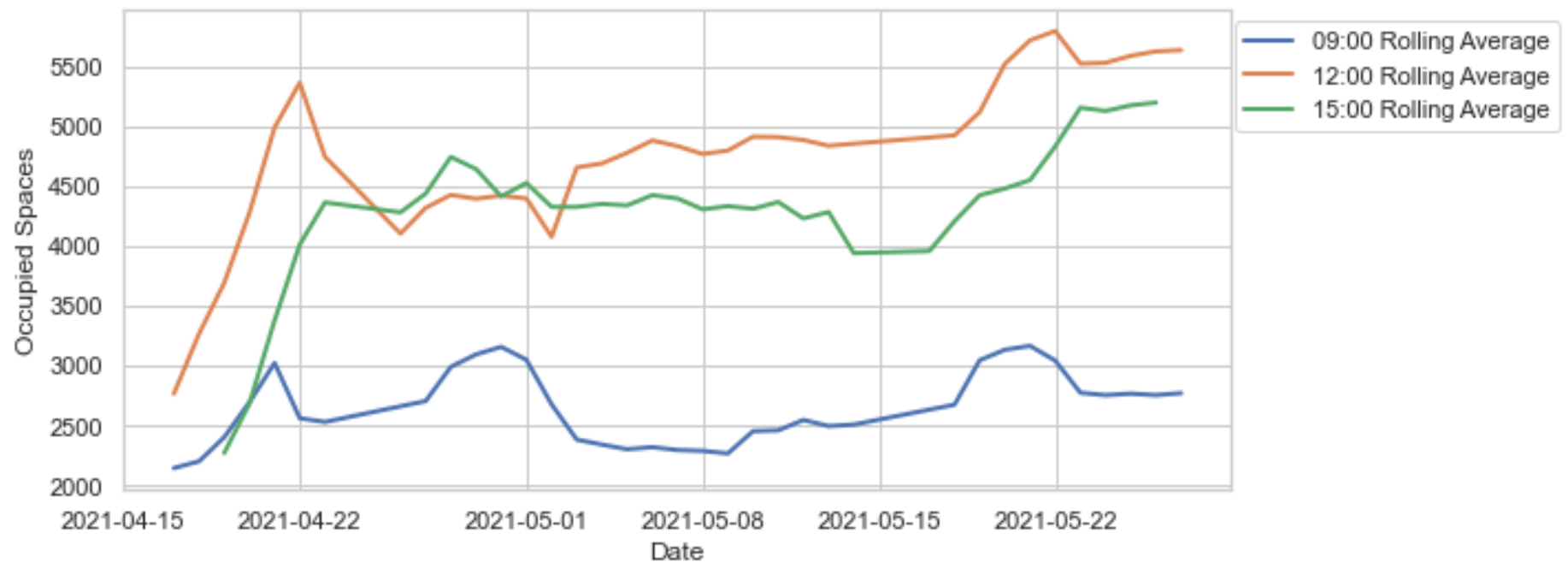


Comparing the average weekday traffic count by hour of the day for the first, second and third national lockdowns. It should be noted that at the time of writing, the third national lockdown was still ongoing and therefore only data between 05/01/21 and 25/04/21 has been included for lockdown 3.

12. CHANGE IN PARKING OCCUPANCY OVER TIME

Number of Occupied Spaces

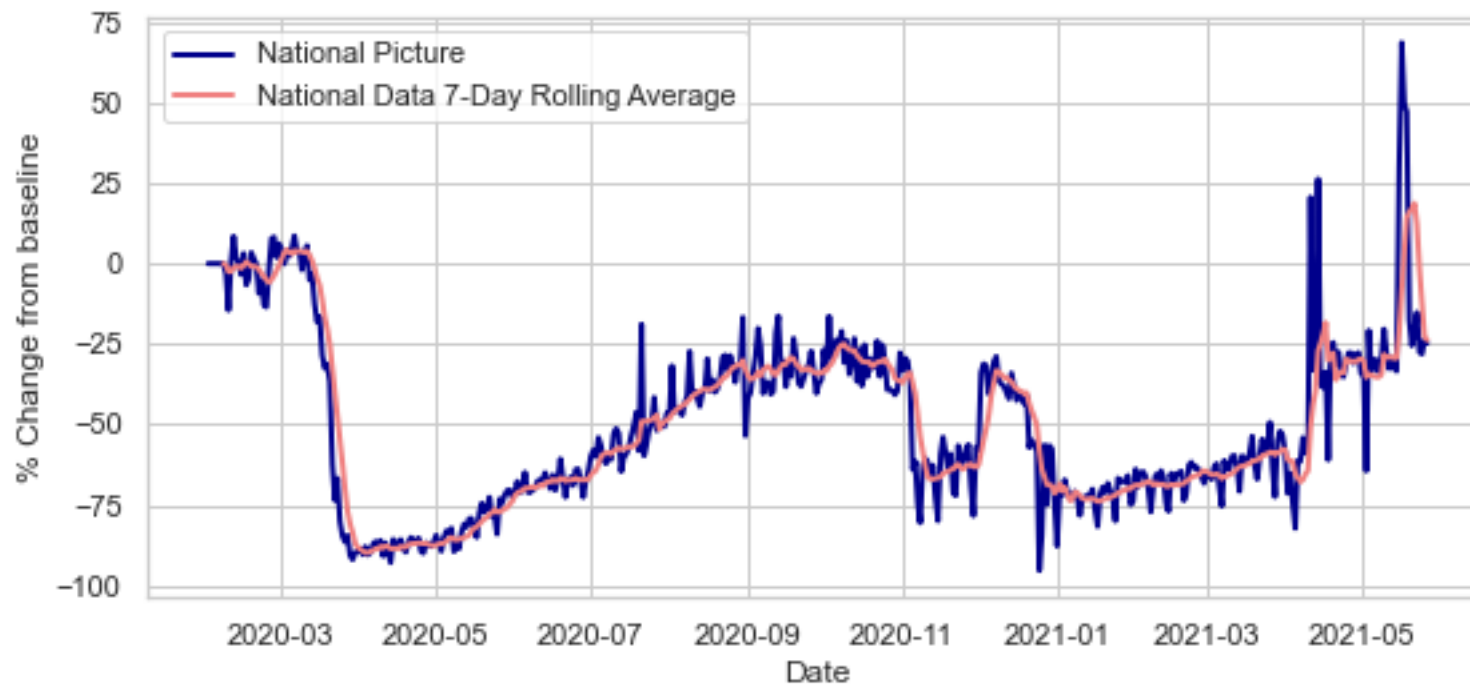
A rise in overall parking incoming vehicles occurs after the ease of lockdown on the 12th of April. Afternoon parking levels have increased while morning levels remain lower.



13. CHANGE IN AVERAGE PARKING LEVELS NATIONALLY OVER TIME

% Change from baseline

Overall parking levels see a spike in levels since the reduction of lockdown restrictions. The 12th of April and the 17th of May both record a spike in car park usage.

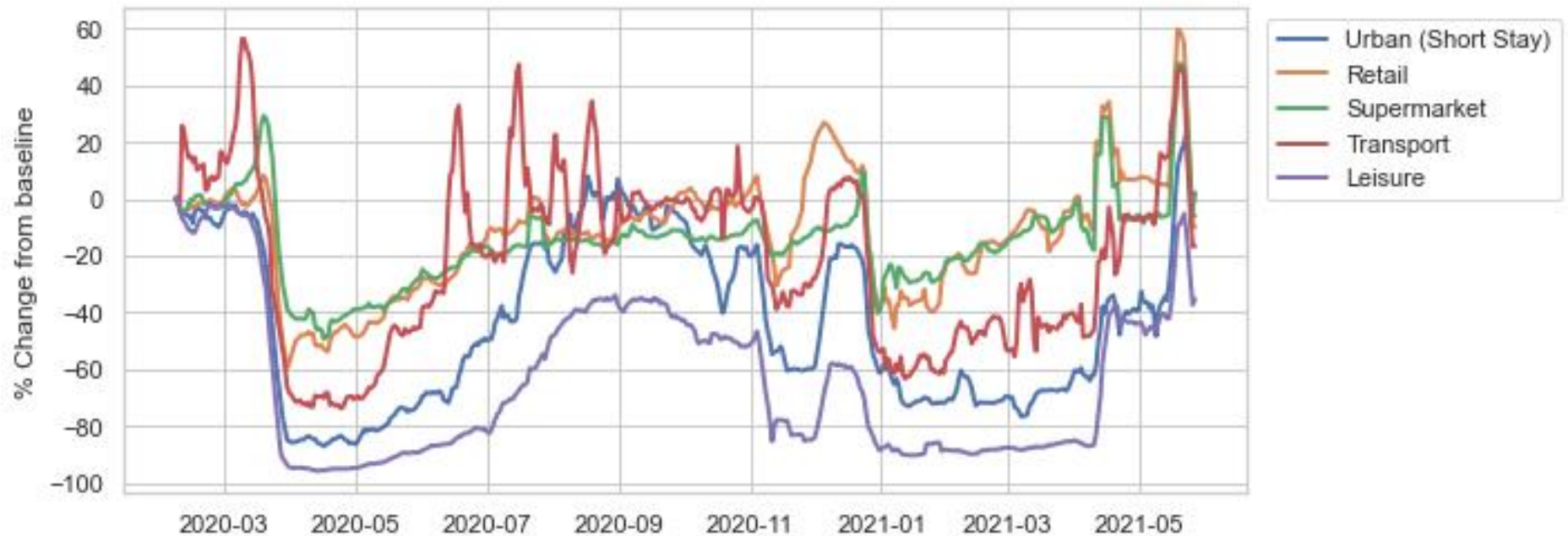


The percentage change from baseline is calculated by taking the median value of incoming vehicles per day and the number of occupied spaces in a car park and comparing it to a baseline of 1st to the 7th of February 2020.

14. CHANGE IN AVERAGE PARKING LEVELS NATIONALLY BY SECTOR

% Change from baseline.

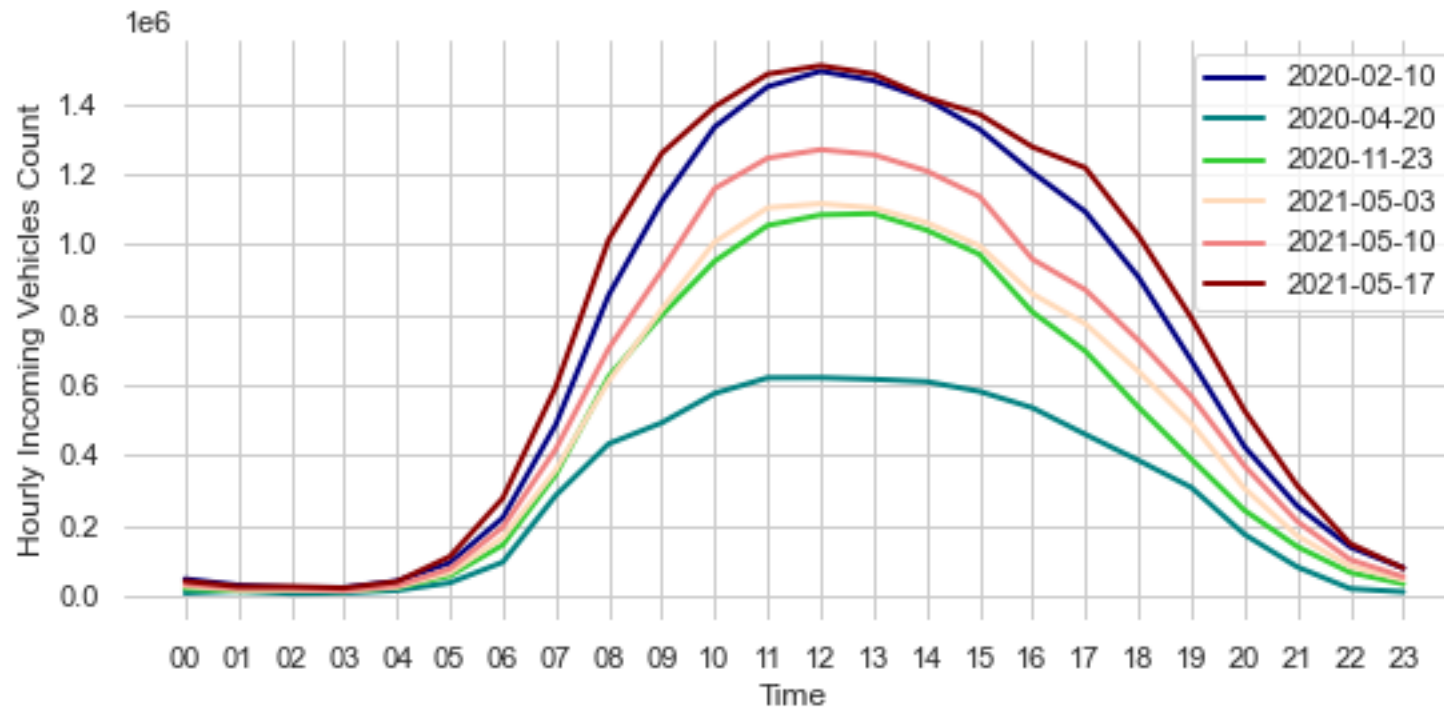
Parking levels across sectors follow a similar trend to the national picture, with the retail sector recovering at the quickest rate.



15. PARKING HOURLY BREAKDOWN

Incoming Vehicle Counts.

Overall car park incoming vehicle counts follow the pre-pandemic baseline.



DATA METHOD

The following provides some detail behind how the data has been analysed:

- The baseline has been defined as the first week of February 2020 (1st February – 7th February) for the following reasons:
 - This is consistent with national reporting.
 - Not all data sources can provide baseline data from previous years.
 - The first week of February is considered a normal working week unaffected by poor weather and half term dates later in February.
- Each day of the week has its own baseline.
- Only those datasets for which data was available for the first week of February have been included in the baseline comparison outputs.
- Baseline comparisons at aggregated Local Highway Authority (LHA) level have only been calculated using traffic/cycling sensors that contributed to the baseline to reduce the impact of new sensors being added to data sources
- Average daily traffic volumes have been used to minimise the impact of individual sensors changing between active and inactive states.
- Averages have been calculated using the median (50th percentile) to reduce the impact of outliers.

Please note that each week not all datasets that contribute to our analysis are available when this report is produced. Therefore, as we add new datasets when they become available, enhance validation of those we've received and refine the underlying methodology, the overall values may change, however we expect the trends to remain the same.

COVID-19 Timeline

FEBRUARY 2020	
04/02/2020	China Advice – All UK citizens advised to leave China
MARCH 2020	
10/03/2020	Italy Air Travel – Majority of flights to and from Italy suspended
12/03/2020	7-day Isolation – 7-day self-isolation for individuals presenting symptoms
16/03/2020	Social Distancing – Households to self-isolate for 14-days if symptoms present. Work from home where possible. Avoid pubs, clubs, theatres etc. 12-week isolation for elderly and vulnerable (commencing end of week)
17/03/2020	UK Foreign Travel 1 – Foreign Secretary advises against all non-essential travel overseas
21/03/2020	Schools Closed – Schools to remain closed until further notice (exception for key workers)
23/03/2020	UK Lockdown – Guidance provided for essential travel only. All non-essential businesses required to close. Public events banned
23/03/2020	UK Foreign Travel 2 – Foreign Secretary advises all British travellers to return to the UK
28/03/2020	PM's Letter – Prime Minister issues guidance letter to all UK households
APRIL 2020	
16/04/2020	NPCC Guidance – NPCC issues guidance clarifying reasonable excuses for leaving home
MAY 2020	
10/05/2020	Those who cannot work from home are encouraged to return to work. Avoid public transport where possible and instead walk or cycle.
11/05/2020	Relaxation Document – The UK government publishes a 50-page document setting out further details of the phases for lifting the lockdown restrictions.
13/05/2020	Individuals can undertake unlimited exercise (and can travel to do so). Individuals can meet someone from another household providing it is on a one-to-one basis. All garden centres are allowed to open. House moves and viewings are now permitted.
18/05/2020	Rail Operators – Rail operators begin running more train services.
JUNE 2020	
01/06/2020	Schools re-open for some pupils. Groups of up to six people from different households allowed to meet outside
15/06/2020	All non-essential retailers and zoos in England reopened
19/06/2020	UK's COVID-19 Alert Level is lowered from Level 4 (severe risk, high transmission) to Level 3 (substantial risk, general circulation)

JULY 2020	
04/07/2020	Further relaxation of social distancing and reopening of pubs, restaurants, hotels and hairdressers on 4 th July
25/07/2020	Gyms and other indoor services reopen in England
AUGUST 2020	
21/08/2020	Driving tests are approved to go ahead
SEPTEMBER 2020	
01/09/2020	Large number of schools across England re-open for the autumn term
08/09/2020	All schools across England have re-opened
14/09/2020	Rule of six comes into effect to tackle coronavirus, where any social gatherings of more than six people will be against the law
OCTOBER 2020	
14/10/2020	Tiered level restrictions were implemented across different local areas in England. Liverpool placed on highest alert (Tier 3).
NOVEMBER 2020	
05/11/2020	England goes into second National Lockdown
DECEMBER 2020	
02/12/2020	Second national lockdown in England ends and three-tiered local restriction system is re-implemented.
20/12/2020	London and South East England enter Tier 4 restrictions.
JANUARY 2021	
05/01/2021	Third national lockdown in England commences.
MARCH 2021	
08/03/2021	All schools re-opened.
29/03/2021	Initial lockdown restrictions lifted, groups of 6 allowed to meet outside.
APRIL 2021	
12/04/2021	Lockdown restrictions eased, hairdressers, gyms and outdoor recreation venues are allowed to re-open.

Contact us

All authorities are encouraged to share best practice for inclusion in this report. Authorities not yet contributing but who still have data to share are encouraged to do so.

Please contact info@ttf.uk.net

Thank you to...

All local authorities and their consultancies and contractors who have shared data with the Transport Technology Forum to enable this report to be collated, and those in the wider industry who also provided data directly. The TTF, which is sponsored by the Department for Transport and Innovate UK is grateful to ITS (UK) and its members for their swift support in recruiting Local Authorities to participate.

The 'Understanding Travel Patterns during COVID-19' project has been awarded the [ITS UK - Project of the Year Award 2020](#) which would not have been possible without all of your support. The judges were impressed that this project demonstrated how the industry can come together, and underlined how the TTF can coordinate a collaborative front with Local Authorities and commercial data suppliers to collect, process and visualise over 16 million travel movements during the lockdown period and beyond.

This report provides regularly updated intelligence and findings from the Transport Technology Forum COVID-19 Local Authority Travel Data Project. This project is collecting and analysing traffic and travel data from local highway authorities across England to present a national picture of travel patterns and behaviour, and local authority responses to the COVID-19 crisis.