



COVID-19 LOCAL AUTHORITY TRAVEL AND TRANSPORT DATA WEEKLY DIGEST

Week commencing 05th April 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.

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 decreased to an average of 13.5% below baseline levels in the w/c 29th March, a 3% decrease compared to the previous week. This is predominantly caused by a drop in traffic on the Easter Bank Holiday, Friday the 2nd of April.
- Figure 2 shows that for the w/c 29th March, traffic levels have increased significantly since the previous week, with a weekly high on Thursday 1st of April of 6% below the pre-pandemic baseline and a weekly low of 32% below the baseline on Friday 2nd April.
- Weekday AM peak traffic becomes less pronounced due to a decrease in traffic on the Easter Bank Holiday on Friday. Interpeak and PM peak weekday traffic has decreased slightly since the previous week.
- Weekend traffic volumes follow a similar bell-shaped curve as observed in previous weeks, with a slight decrease in traffic compared to the previous week, as seen in Figure 3.2. The variation in traffic by vehicle type is shown in Figures 4.1 for weekday traffic and Figure 4.2. for weekend traffic. Car levels vary during the week between 7% and 33% below the baseline for the w/c 29th of March. HGV/LGV levels vary from 43% above the baseline to 47% below the baseline. The high variation in HGV/LGV corresponds to a reduction in business travel during the Bank Holiday Friday.
- 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 AM peak has remained pronounced. In the Derbyshire the AM peak continues to exceed the-pandemic baseline.
- Figure 9 shows that traffic is on average lower on Mondays and higher on Sundays during Lockdown 3, when compared to the day-of-week trend seen pre-pandemic. Lockdown 3 levels are on average squarely in between Lockdown 1 and Lockdown 2 levels.
- Figure 10 shows a comparison of median traffic levels for timelines of the three national lockdowns. Lockdown 2 experienced a surge in traffic levels immediately before the lockdown, possibly due to businesses mobilising in advance of widespread closure and people travelling to different locations to isolate. Lockdown 3 levels started at Lockdown 1 levels but are now approaching Lockdown 2 levels.
- 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.

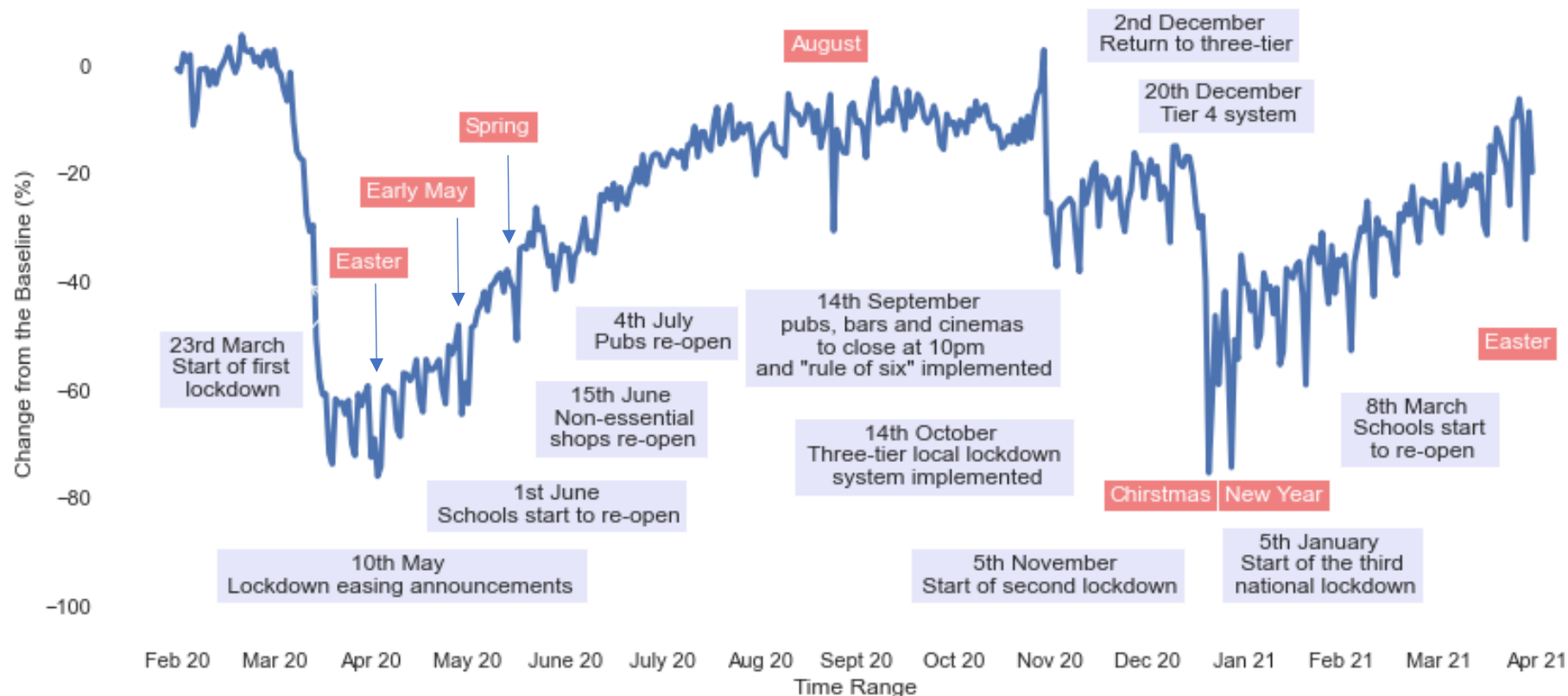
Cycling

- As a result of improved weather conditions across England, cycling levels have increased marginally compared to previous weeks (Figure 6). The trend is similar to the previous weeks, with higher cycling levels during the weekend. The weekly high is 114% above the baseline on Sunday the 4th of April and the weekly low 11% above the baseline on Friday the 2nd of April.
- Weekday cycling for the week commencing 29th March has attenuated AM and PM peaks. (Figure 8.1).
- The weekend cycling profile is similar to the previous two weeks (Figure 8.2).

1. CHANGE IN AVERAGE DAILY TRAFFIC FLOW OVER TIME

Compared to baseline (%)

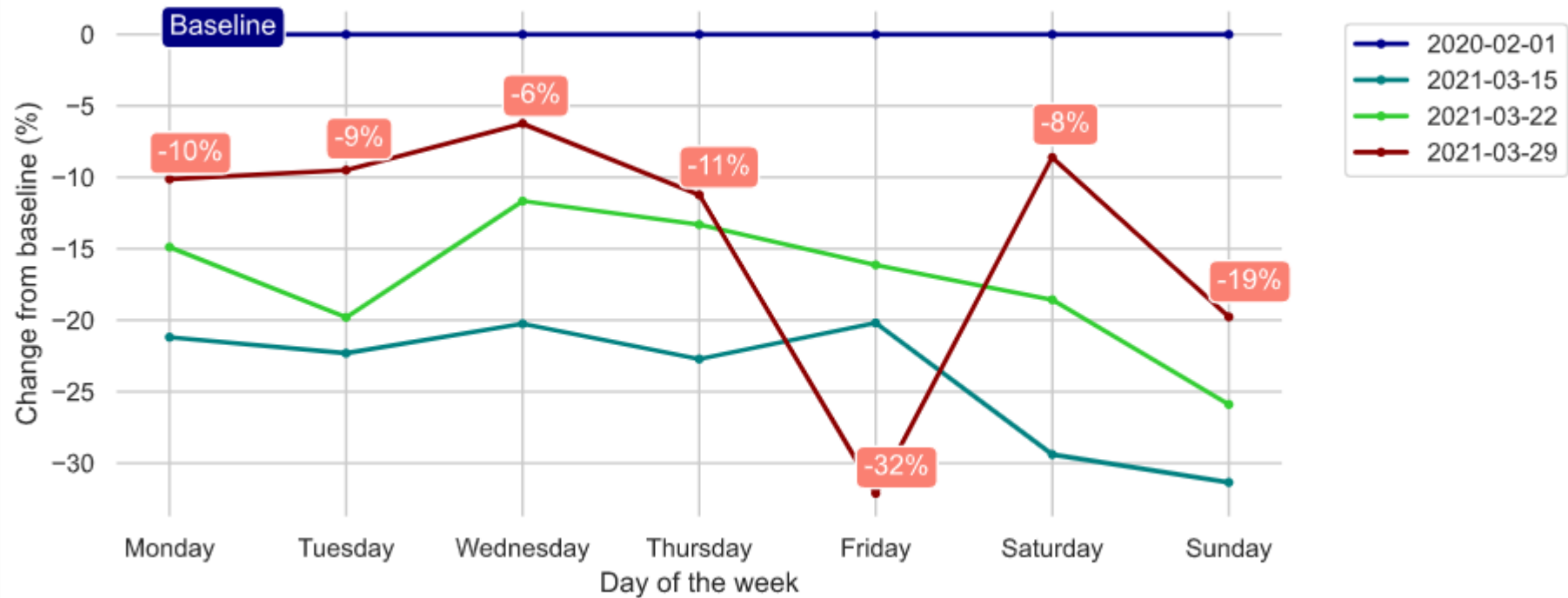
Traffic levels decrease marginally overall, with variations due to the Easter Bank Holiday.



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

Compared to baseline (%)

Overall traffic volumes are marginally higher compared to the previous two weeks.
Traffic levels decrease slightly during the bank holiday weekend.

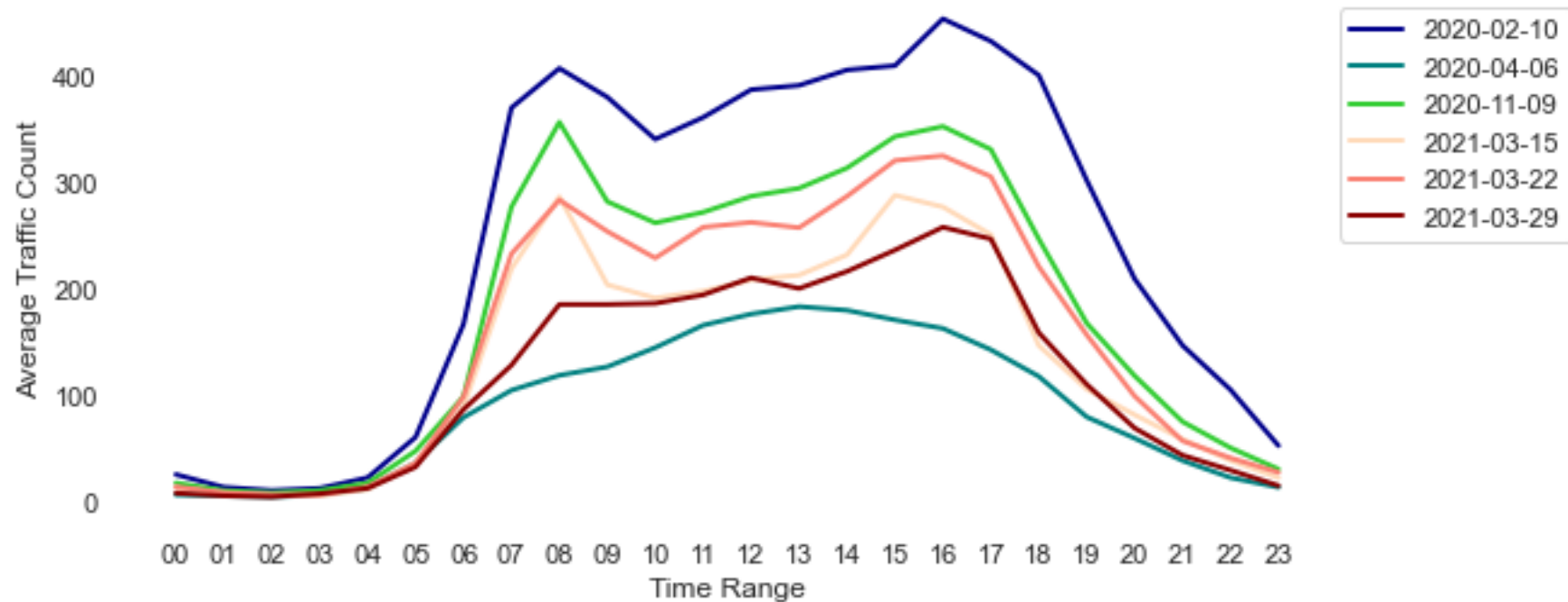


Average day of week traffic volumes compared to the baseline week (01/02/2020), and the 3 most recent weeks.

3.1. MEDIAN WEEKDAY TRAFFIC BY HOUR OF DAY

Hourly traffic counts

The weekday AM peak is less pronounced due to the Easter Bank Holiday on Friday.



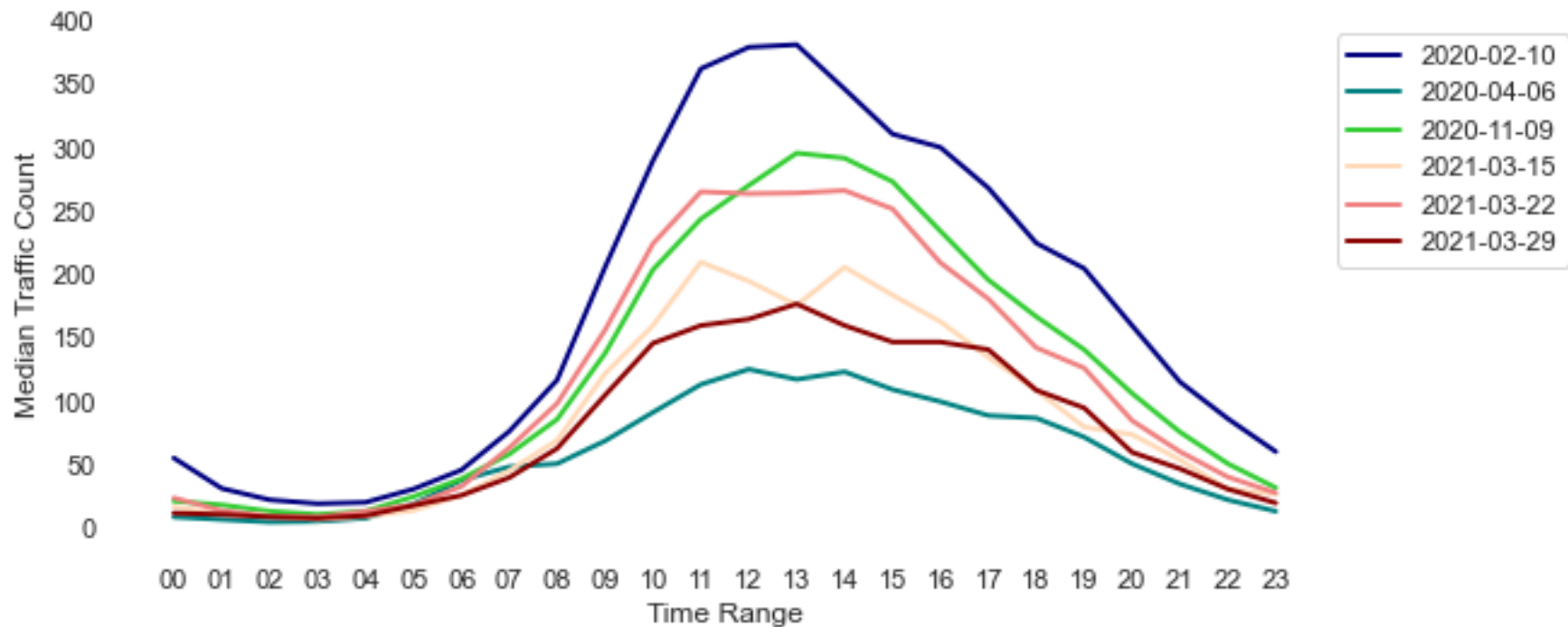
Weekday traffic volumes compared to a pre-pandemic week (10/02/20) and early lockdown (06/04/20) across all datasets. This graph uses the median traffic count for each hour of each weekday, as well as the median across all weekdays. This is different to what has been published in previous reports (before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

3.2. MEDIAN WEEKEND TRAFFIC BY HOUR OF DAY

Hourly traffic counts

Weekend traffic is reduced compared to the previous two weeks.

The reduction in traffic can be attributed to the Easter Weekend on the 3rd and 4th of April.



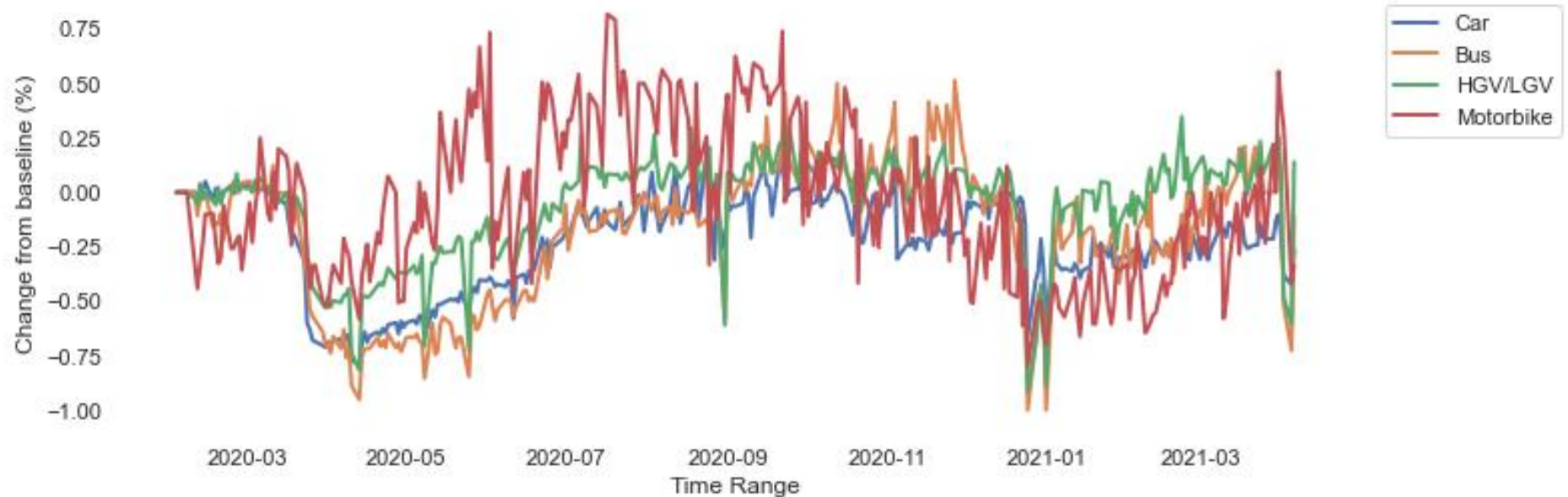
Weekday traffic volumes compared to a pre-pandemic week (10/02/20) and early lockdown (06/04/20) across all datasets. This graph uses the median traffic count for each hour of each weekday, as well as the median across all weekdays. This is different to what has been published in previous reports (before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

4.1. CHANGE IN AVERAGE WEEKDAY TRAFFIC FLOW BY VEHICLE CLASS

Compared to baseline (%)

Car levels vary between 7% and 33% below the baseline for the w/c 29th of March.

HGV/LGV levels vary from 43% above the baseline to 47% below the baseline.



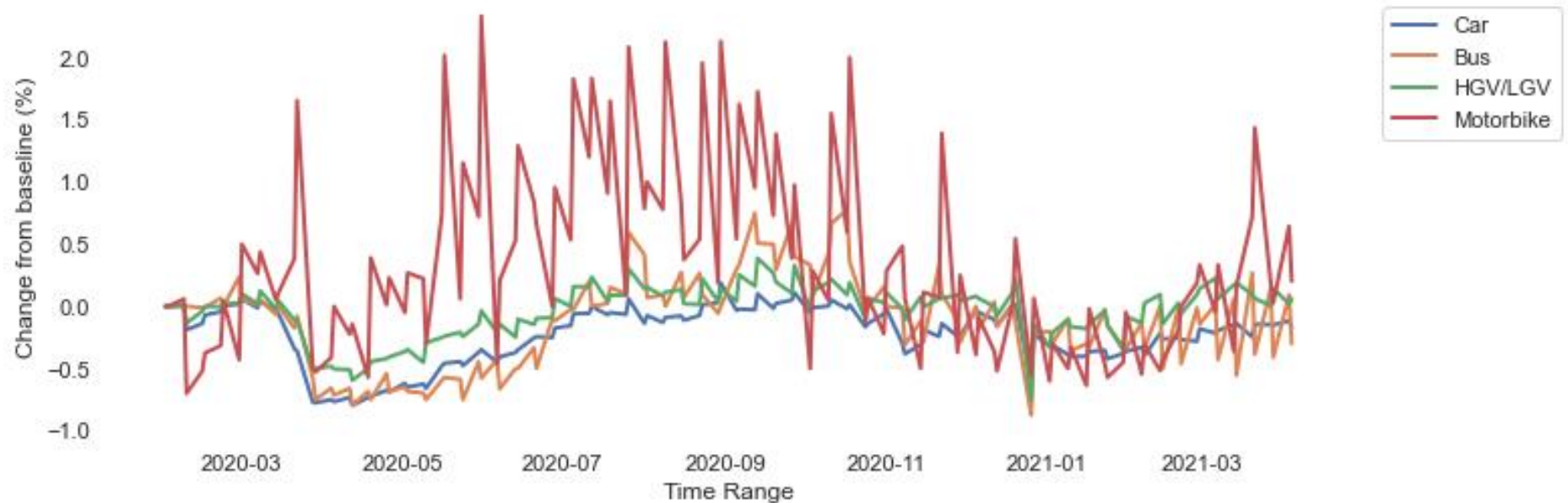
Change in average vehicle trips by vehicle class where available in the source dataset.

4.2. CHANGE IN AVERAGE WEEKEND TRAFFIC FLOW BY VEHICLE CLASS

Compared to baseline (%)

Car levels during the weekend are constant at 9% below the baseline.

HGV/LGV levels vary between 2% and 6% above the 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.

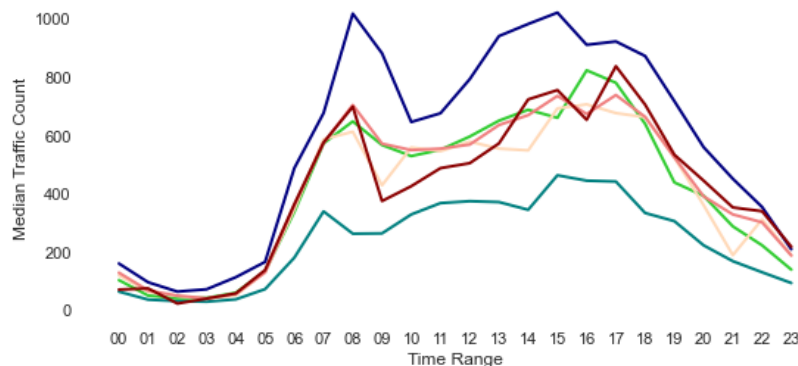


Data has been provided by: Birmingham City Council, City of York Council, Suffolk County Council, Hampshire Council, Derbyshire County Council, Leicestershire County Council (excludes Leicester City).

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

Hourly traffic counts

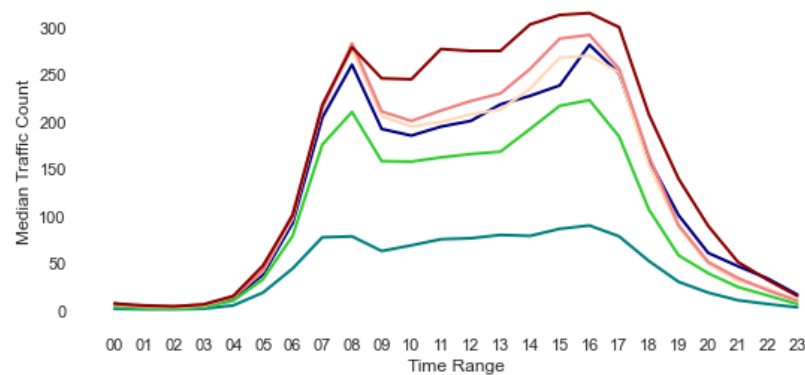
5.2.1. BIRMINGHAM



Traffic levels in Birmingham are approaching those seen during the second national lockdown.

The AM peak remains pronounced, similar to previous weeks.

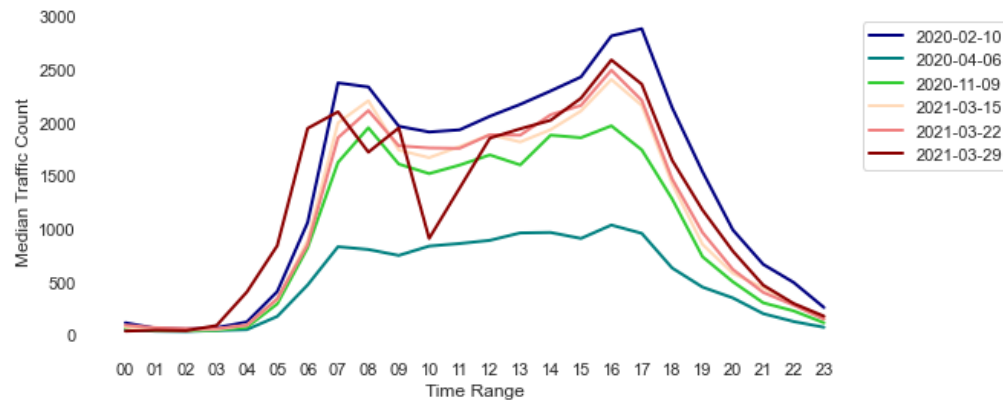
5.2.2. DERBYSHIRE



Traffic levels in Derbyshire now marginally exceed the pre-pandemic baseline.

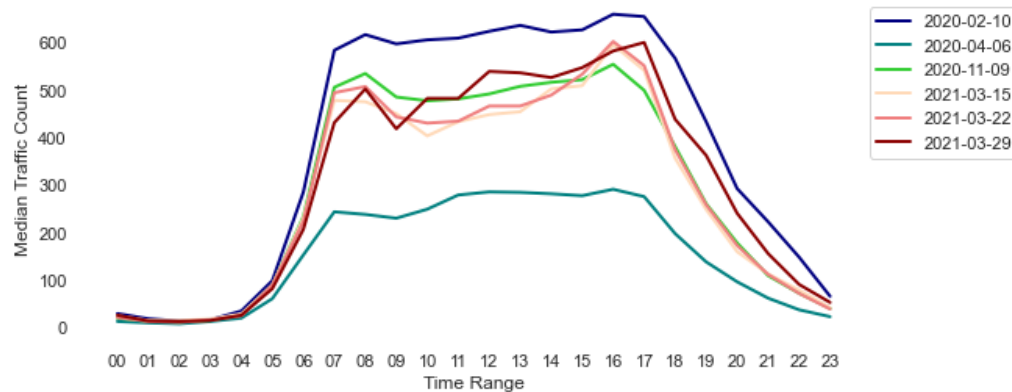
The AM peak remains pronounced while the inter-peak traffic also increases.

5.2.3. HAMPSHIRE



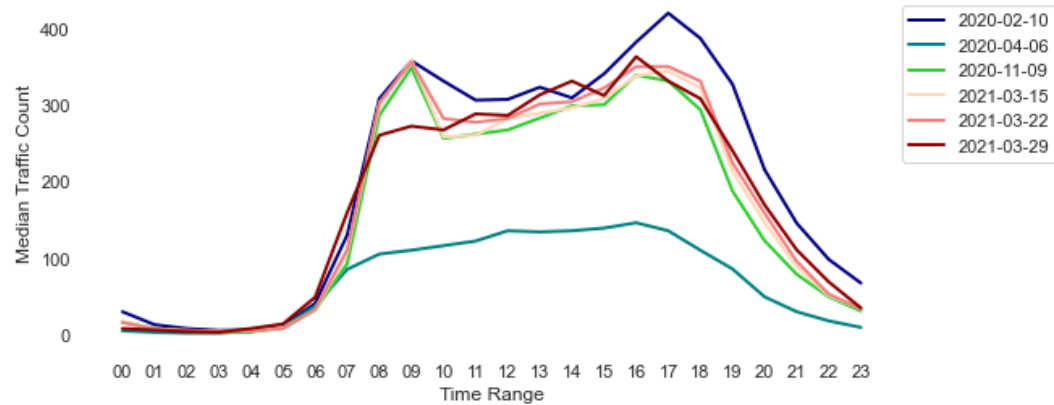
Traffic levels in Hampshire exceed those seen during the second national lockdown. There is a significant drop in the interpeak measured traffic at around 10:00 am.

5.2.4. SUFFOLK



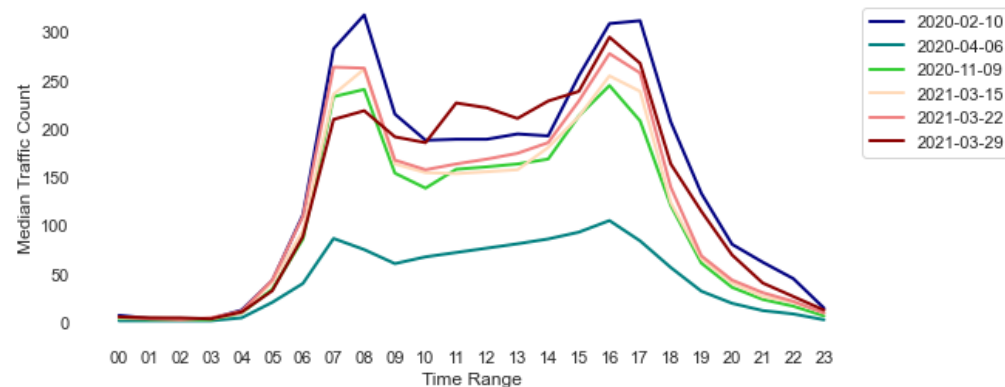
Traffic levels in Suffolk are approaching those seen during the second national lockdown. The PM peak becomes less pronounced while the interpeak traffic increases.

5.2.5. CITY OF YORK



AM peak traffic levels in the City of York decrease compared to the previous week, with an attenuation of the AM peak.

5.2.6. LEICESTERSHIRE (EXCEPT LEICESTER CITY)

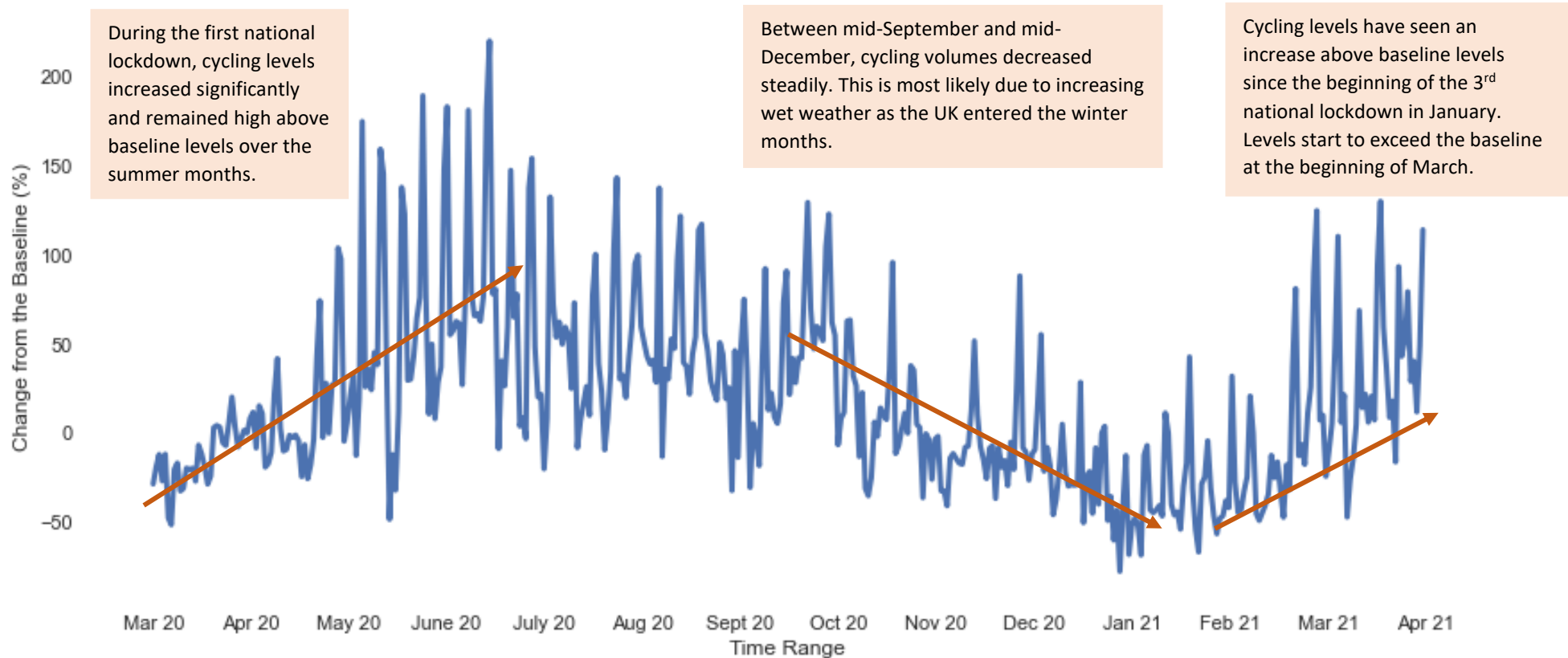


Traffic levels in Leicestershire are follow a similar pattern to those seen during the previous week. The AM peak is less pronounced and the interpeak traffic increases.

6. CHANGE IN AVERAGE DAILY CYCLING FLOW

Compared to baseline (%)

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



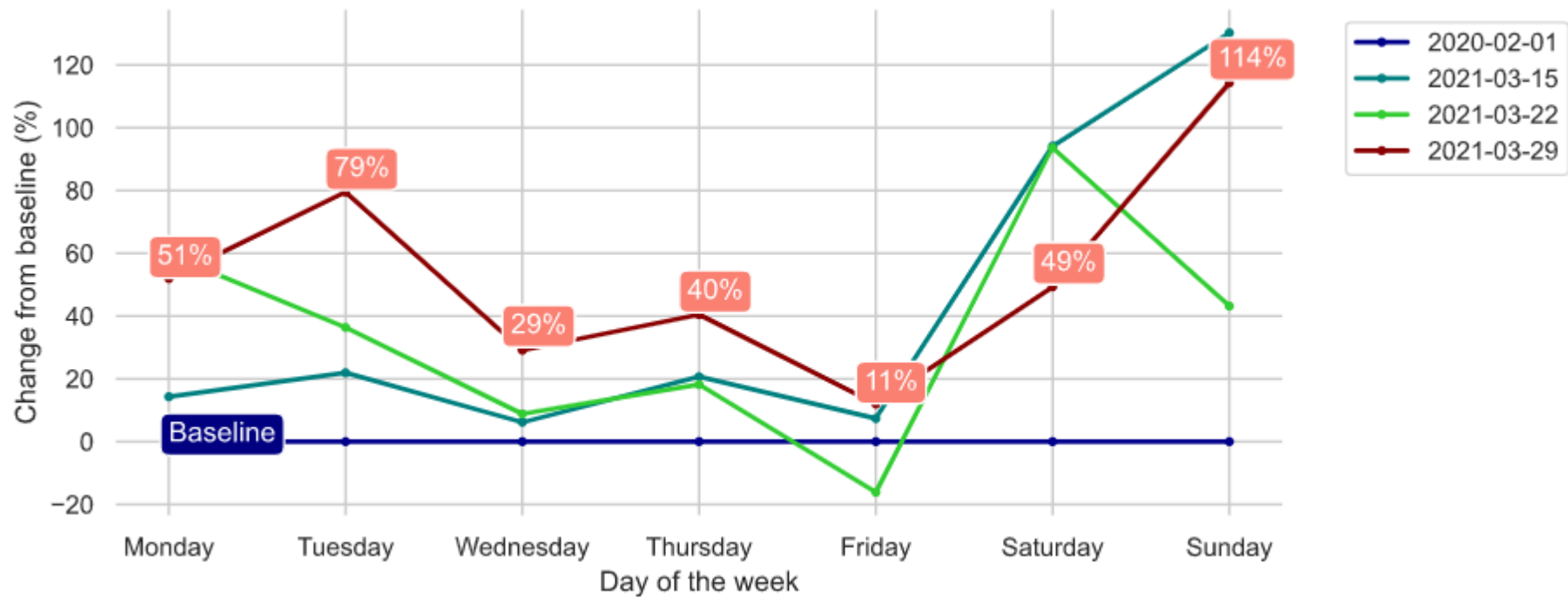
Change in average daily cycling volumes since 1st of March across all sources compared to the baseline (the first week of February 2020)

7. CHANGE IN AVERAGE DAILY CYCLING BY DAY OF WEEK

Compared to baseline (%)

Cycling levels are marginally higher compared to the previous weeks.

Weekend cycling levels are higher compared to weekday cycling levels.



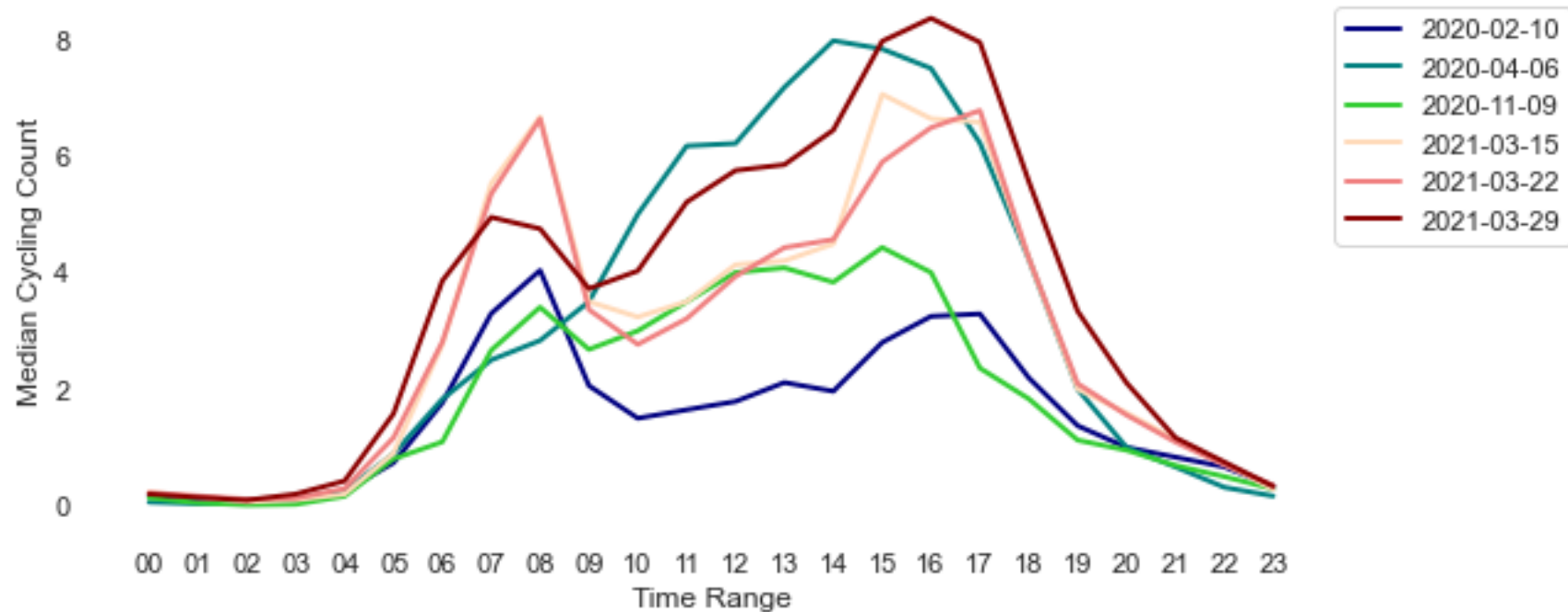
Average day of week traffic volumes compared to the baseline week (01/02/2020), and the 3 most recent weeks.

8.1 MEDIAN WEEKDAY CYCLING BY HOUR OF DAY

Hourly counts

The AM peak is less pronounced compared to the previous weeks.

A significant increase in the interpeak traffic can be observed for the w/c 29th of March.

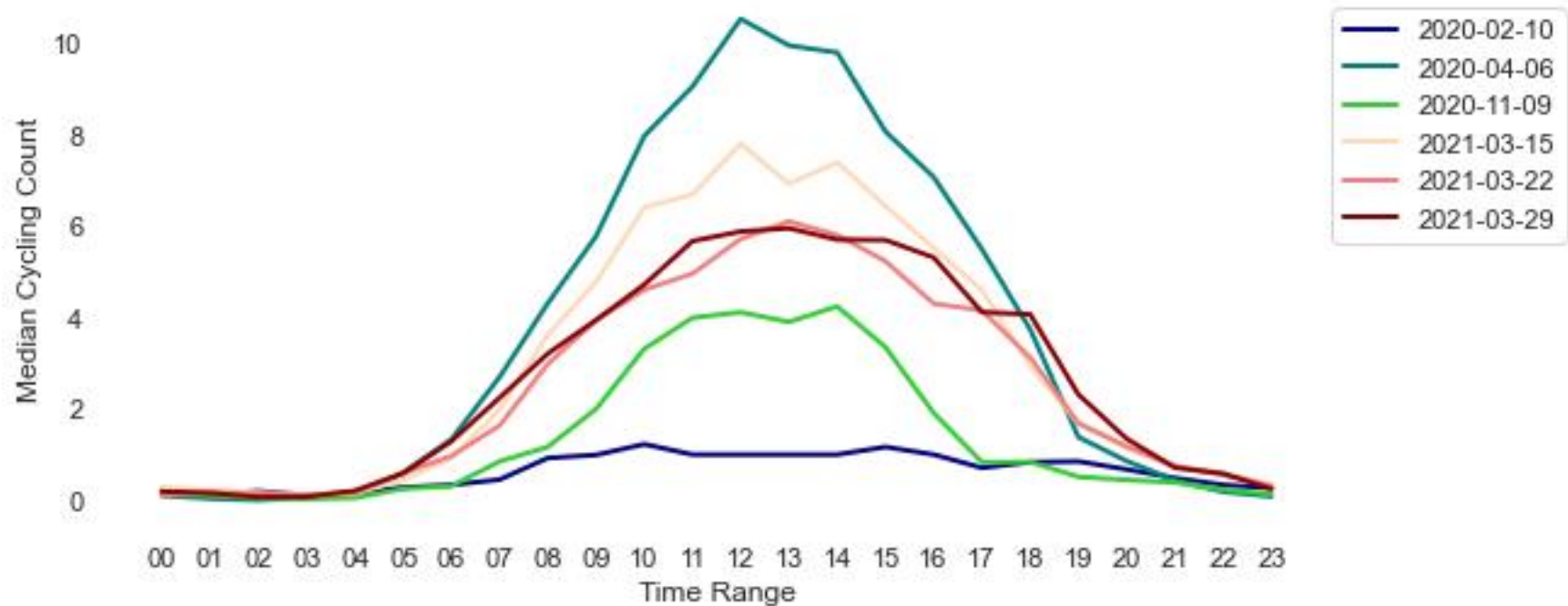


Weekday cycling volumes compared to a pre-pandemic week (10/02/20) and early lockdown (06/04/20) across all datasets. This graph uses the median cycling count for each hour of each weekday, as well as the median across all weekdays. This is different to what has been published in previous reports (before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



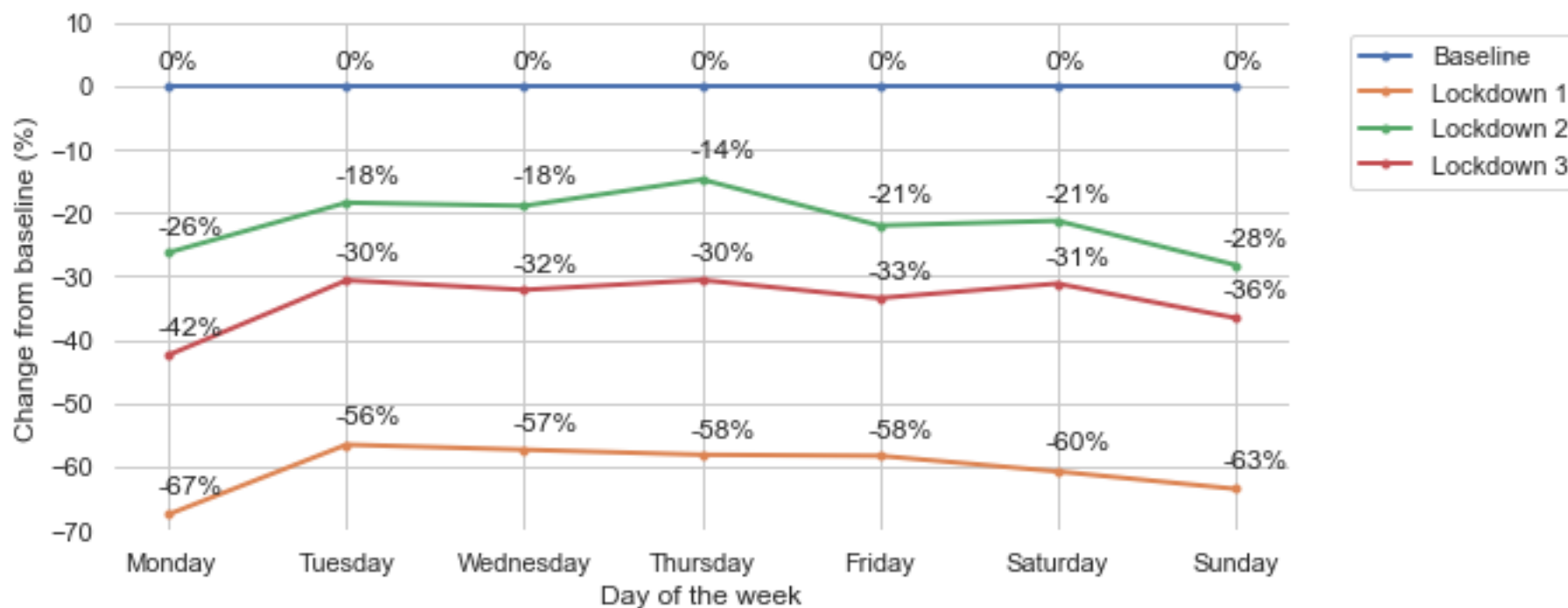
Weekend cycling volumes compared to a pre-pandemic week (10/02/20) and early lockdown (06/04/20) across all datasets. This graph uses the median cycling count for each hour of each weekend day, as well as the median across all weekend days. This is different to what has been published in previous reports (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 situated between Lockdown 1 and Lockdown 2.

The average levels of Lockdown 3 approach those seen during Lockdown 2.



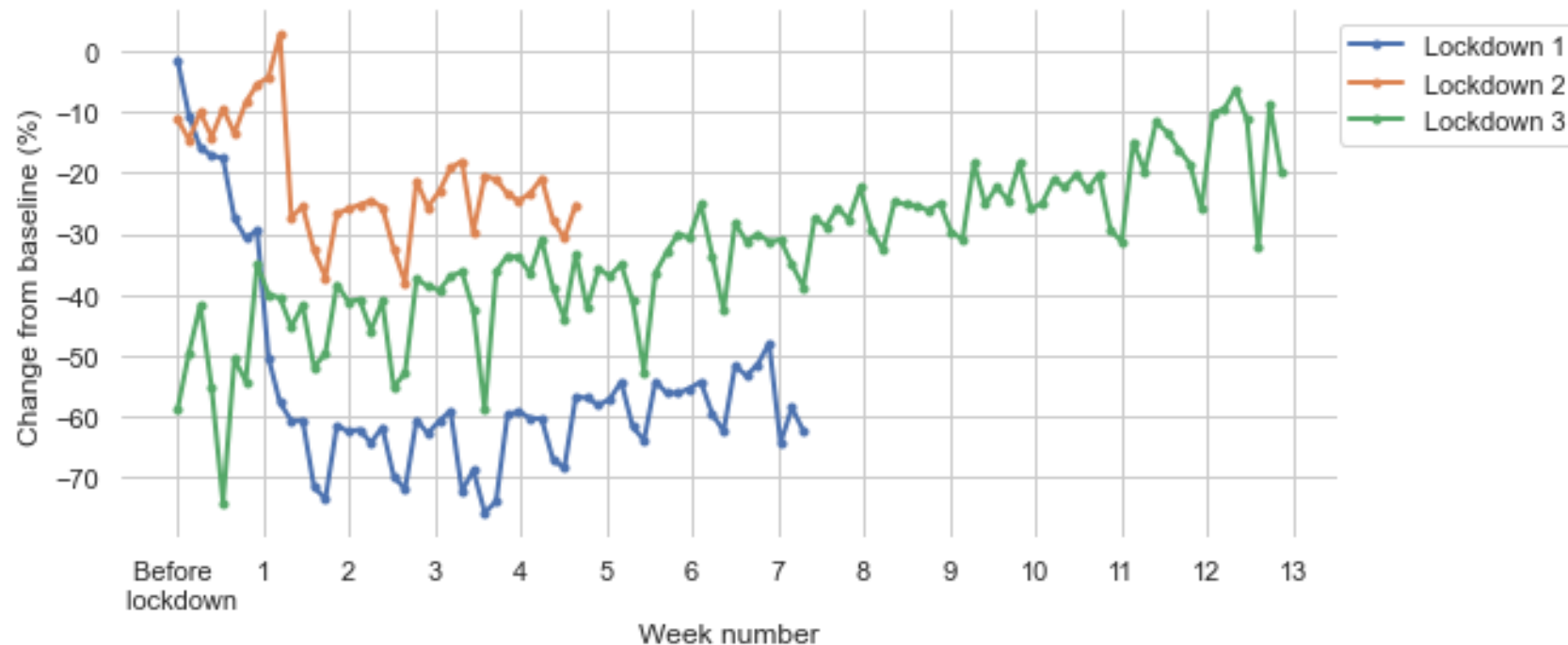
Comparing the average weekday median percentage change from the baseline for the first, second and third national lockdowns. It should be noted that at the time of writing, the third national lockdown was still ongoing and therefore only data between 05/01/21 and 28/03/21 has been included for lockdown 3.

10. LOCKDOWN PERCENTAGE CHANGE FROM BASELINE

Compared to baseline (%)

Lockdown 2 saw a surge in traffic immediately before the lockdown.

Lockdown 3 levels, while initially in between Lockdown 1 and 2 levels, are now approaching Lockdown 2 levels.

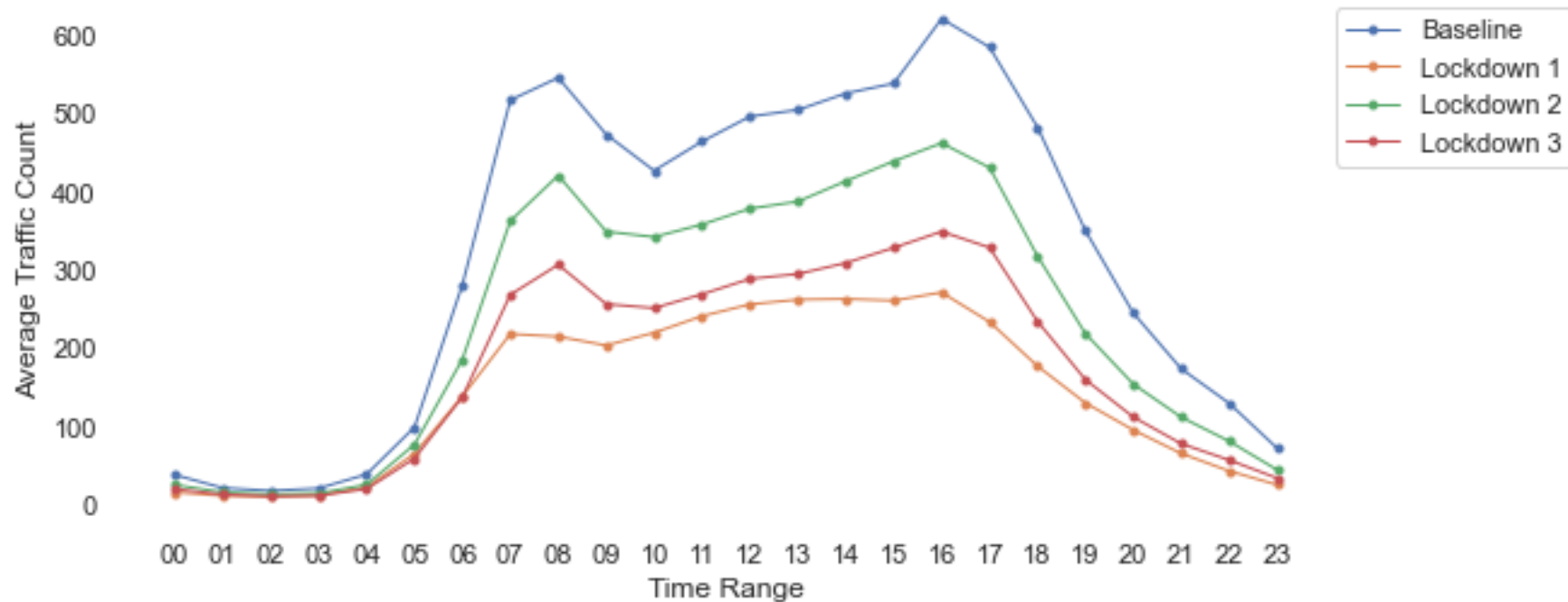


Comparing the median percentage change from the baseline for the first, second and third national lockdowns. It should be noted that at the time of writing, the third national lockdown was still ongoing and therefore only data between 05/01/21 and 04/04/21 has been included for lockdown 3.

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 28/03/21 has been included for lockdown 3.

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

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.