

COVID-19

Local authority travel and transport data

Weekly digest



Week Commencing

12th October 2020

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 is able to 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 the Transport Technology Forum 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.

Highlights summary

The following provides a high-level summary of the key findings within the data:

Traffic Flow

- Over the previous two weeks (28th September and 5th October), the overall change in daily traffic flows has remained consistently 10.4% (Figure 1) below the baseline. In the coming weeks, we expect traffic levels to decline or plateau due to anticipated local lockdowns.
- From 14 September, pubs, restaurants and cinemas were required to close at 10pm and the 'rule of six' was implemented across England. On 14 October, a new three-tiered system of local restrictions is coming into effect which will impact movement in local areas. During this time, a slight decline in median daily traffic flows can be observed nationally when compared to baseline levels (Figure 3).
- For the week commencing 5th October, AM peak, PM peak and interpeak traffic levels on weekdays (Figure 4.1) and weekends (Figure 4.2) are still below pre-lockdown levels.
- In Figure 5.1, it is observed that weekday car traffic levels have decreased below the baseline since last week, while bus/coach and HGV/LGV weekday traffic has remained consistently above baseline. Motorcycle weekday traffic has declined since mid-September.
- Weekend car traffic levels are on par with the baseline (Figure 5.2). After briefly dipping below weekend baseline levels at the end of September, motorcycle traffic on weekends has shown recovery on the 10th and 11th of October.
- Figure 8 shows the change in hourly average weekday traffic flows for the Local Highway Authorities of Birmingham, Derbyshire, Hampshire, Suffolk and York. It highlights that hourly traffic profiles for the last 3 weeks compared to pre-lockdown vary significantly between LHAs.

Cycling

- For the week commencing 28th September, cycling volumes were significantly lower than the previous week, down approximately 30 percentage points (Figure 2). This is most likely due to poor weather as the UK now enters Autumn. However, for the week commencing 5th October, cycling levels have recovered to 14.8% above baseline levels.
- Nationally, cycling at weekends remains above baseline levels with a sharp rise in cycling on Saturday 10th and Sunday 11th October. Cycling volumes had been increasing since mid-August through September, especially on weekends. However poor weather is likely to be a key factor in weekday and weekend cycling decreasing by 70% in late September (Figure 9).
- AM and PM peak cycling levels on weekdays for w/c 5th October are significantly increased when compared to the previous week's levels; on par with levels in the w/c 21 September (Figure 10.1). While AM levels remain below baseline, interpeak and PM peak cycling remains above pre-lockdown levels. Cycling levels on weekends have progressively decreased over the last 3 weeks with the w/c 5th October well below baseline levels in the AM and PM peaks.

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Figure 1 – Overall daily traffic flow change compared to baseline (1-7 Feb 2020)

Week	1. Monday	2. Tuesday	3. Wednesday	4. Thursday	5. Friday	6. Saturday	7. Sunday	Total
05/10/2020	📉 -9.05%	📉 -10.85%	📉 -10.53%	📉 -12.88%	📉 -10.26%	📉 -10.62%	📉 -12.25%	-10.40%
28/09/2020	📉 -9.78%	📉 -10.67%	📉 -9.61%	📉 -7.53%	📉 -9.87%	📉 -14.66%	📉 -15.56%	-10.34%
21/09/2020	📉 -8.59%	📉 -11.92%	📉 -4.69%	📉 -9.53%	📉 -8.44%	📉 -5.39%	📉 -6.38%	-7.99%
14/09/2020	📉 -10.79%	📉 -9.71%	📉 -10.17%	📉 -8.54%	📉 -10.23%	📉 -4.28%	📉 -6.82%	-8.87%
07/09/2020	📉 -10.61%	📉 -10.25%	📉 -11.54%	📉 -17.07%	📉 -9.03%	📉 -5.27%	📉 -2.57%	-9.68%
31/08/2020	📉 -30.62%	📉 -11.87%	📉 -14.67%	📉 -16.09%	📉 -16.22%	📉 -7.77%	📉 -6.99%	-15.15%
24/08/2020	📉 -8.17%	📉 -12.48%	📉 -8.42%	📉 -15.23%	📉 -12.42%	📉 -10.05%	📉 -5.43%	-10.31%
Total	-20.76%	-18.93%	-20.48%	-23.03%	-21.89%	-20.83%	-20.47%	-20.88%

Figure 1: Key dashboard figures showing change in average daily traffic volumes compared to the baseline (first week of February 2020)

Figure 2 – Overall daily cycling change compared to baseline (1-7 Feb 2020)

Week	1. Monday	2. Tuesday	3. Wednesday	4. Thursday	5. Friday	6. Saturday	7. Sunday	Total
05/10/2020	📈 4.35%	📉 -3.35%	📈 14.13%	📈 6.33%	📈 7.11%	📈 30.36%	📈 92.54%	14.81%
28/09/2020	📈 29.70%	📈 25.68%	📉 -15.40%	📈 20.42%	📉 -32.56%	📉 -36.39%	📉 -26.79%	-3.03%
21/09/2020	📈 58.61%	📈 50.45%	📉 -7.93%	📈 8.21%	📈 11.44%	📈 60.00%	📈 52.17%	27.43%
14/09/2020	📈 61.75%	📈 43.95%	📈 53.91%	📈 56.55%	📈 49.34%	📈 100.00%	📈 108.70%	67.16%
07/09/2020	📈 18.47%	📈 37.76%	📈 25.56%	📈 41.23%	📈 36.34%	📈 86.52%	📈 115.75%	46.18%
31/08/2020	📈 9.16%	📈 21.35%	📈 8.45%	📈 4.05%	📈 15.91%	📈 71.43%	📈 86.61%	23.76%
24/08/2020	📈 35.29%	📉 -33.89%	📉 -2.73%	📉 -6.62%	📉 -19.49%	📈 38.64%	📈 85.04%	7.32%
Total	12.83%	15.42%	2.97%	11.76%	9.57%	50.00%	68.18%	20.04%

Figure 2: Key dashboard figures showing change in average daily cycle volumes compared to the baseline (first week of February 2020)

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Figure 3 – Overall daily average traffic flow change from baseline

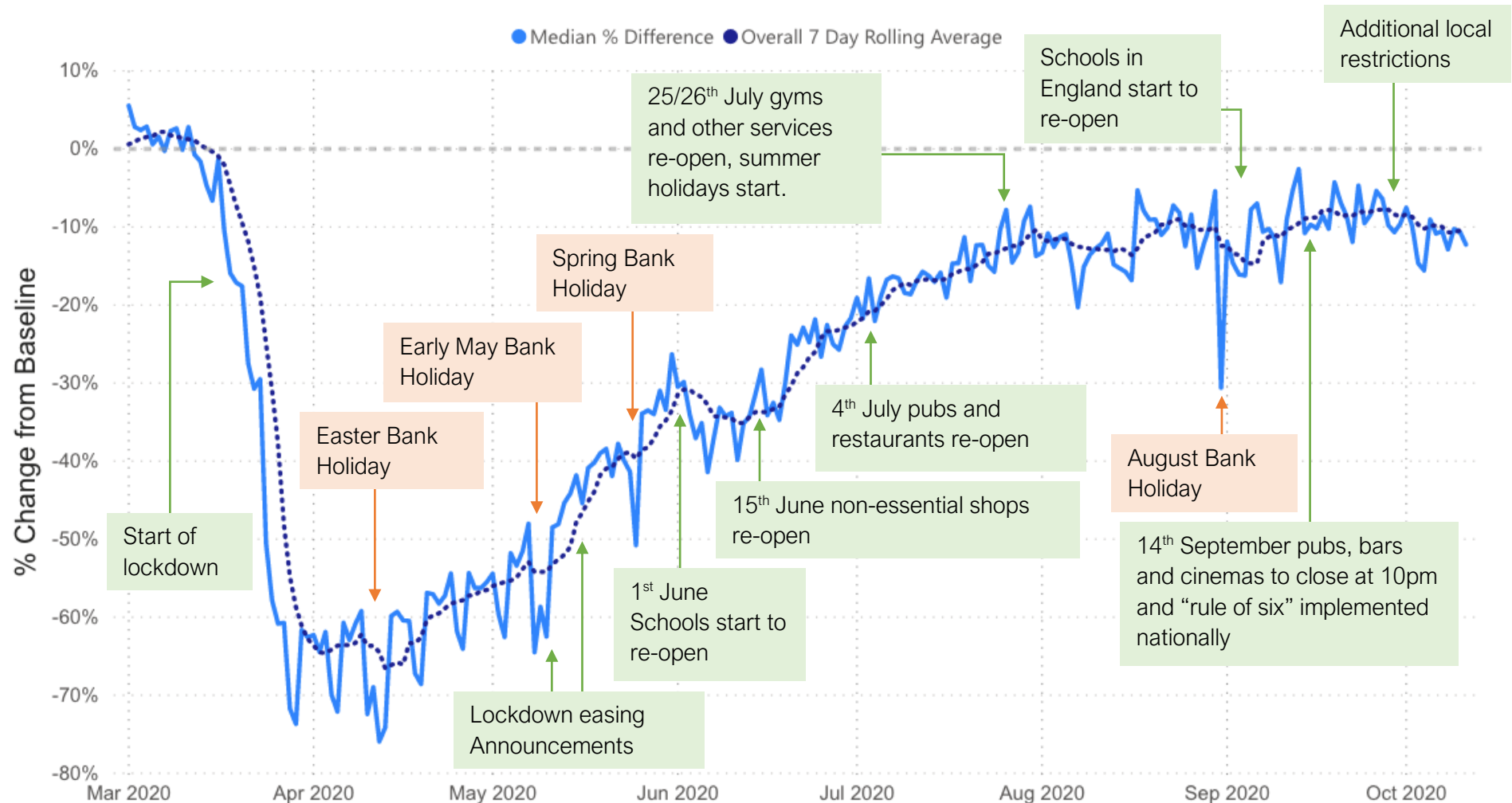


Figure 3: Change in national daily average traffic volumes since 01st March across all sources compared to the baseline (first week of February 2020)

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Figure 4.1 – Overall comparison of average hourly weekday traffic by week

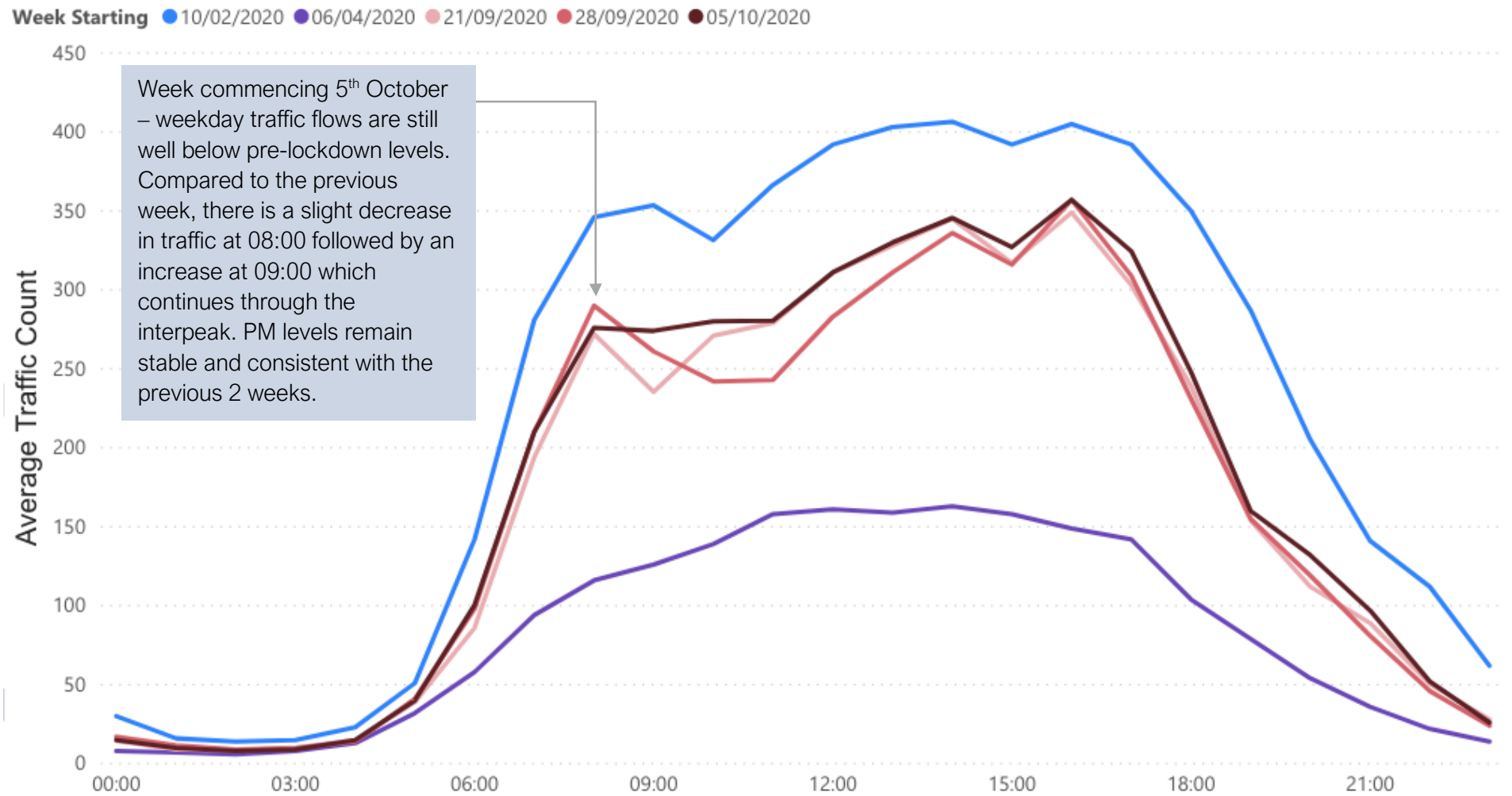


Figure 4.1: Weekday traffic volumes compared to pre-lockdown (10/02/20) and early lockdown (06/04/20) across all datasets

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Figure 4.2 – Overall comparison of average hourly weekend traffic by week

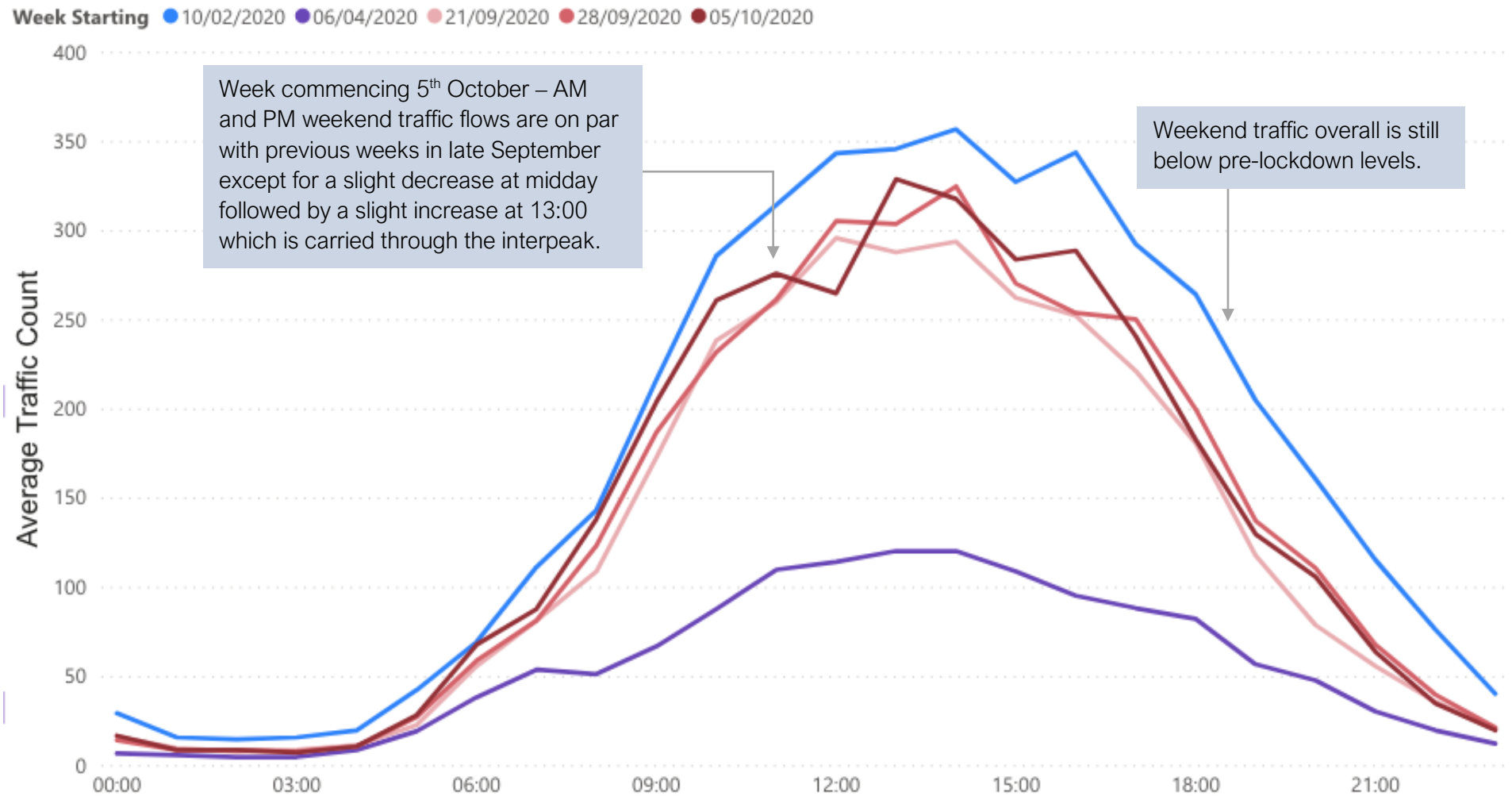


Figure 4.2: Weekend traffic volumes compared to pre-lockdown (10/02/20) and early lockdown (06/04/20) across all datasets

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Figure 5.1 – Overall weekday change in traffic flows by vehicle class

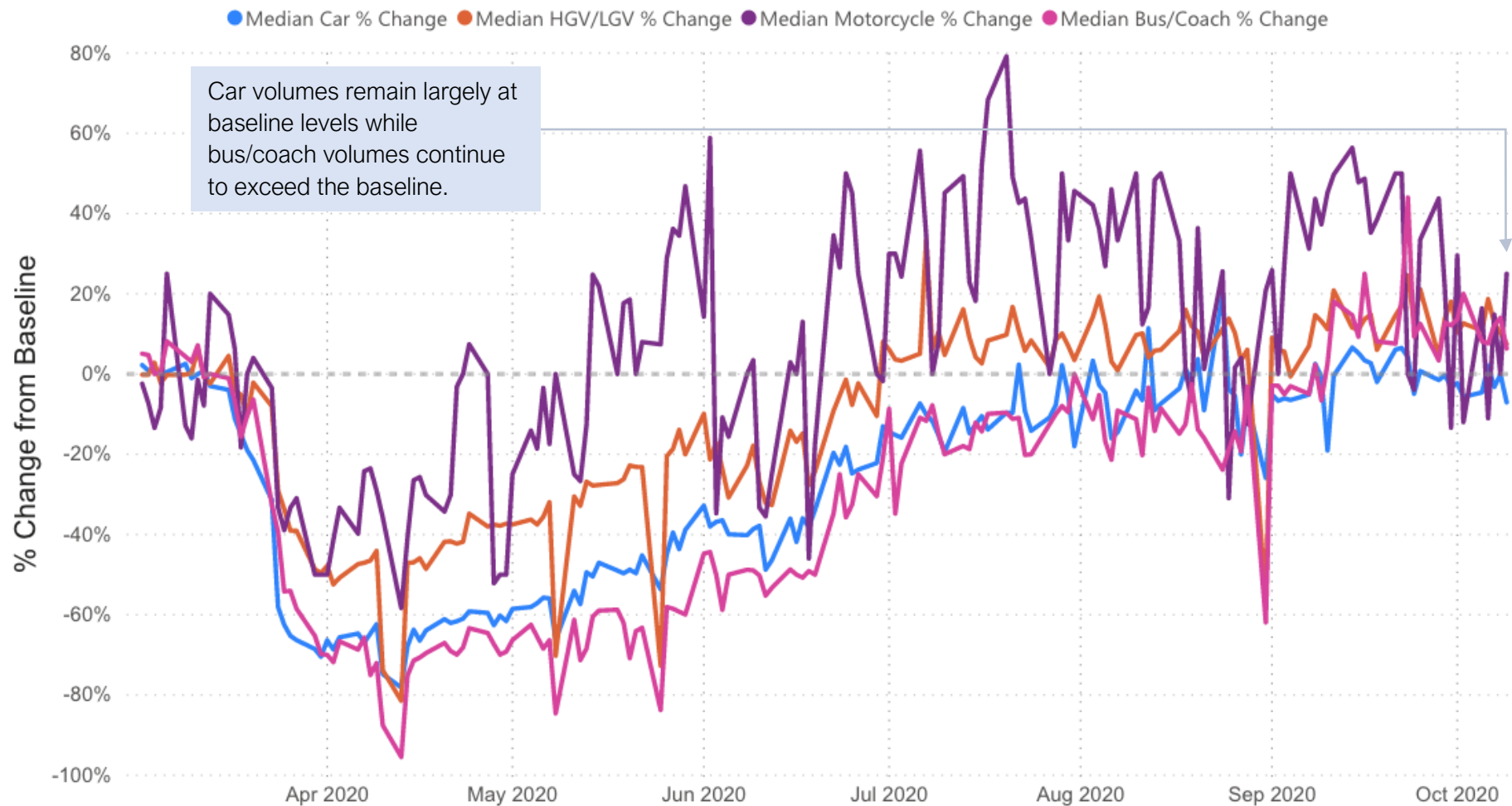


Figure 5.1: Change in average vehicle trips by vehicles class where available in the source dataset (note this data is measured at sensor level so sources with large numbers of sensors will have a greater contribution to the average)

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Figure 5.2 – Overall weekend change in traffic flows by vehicle class

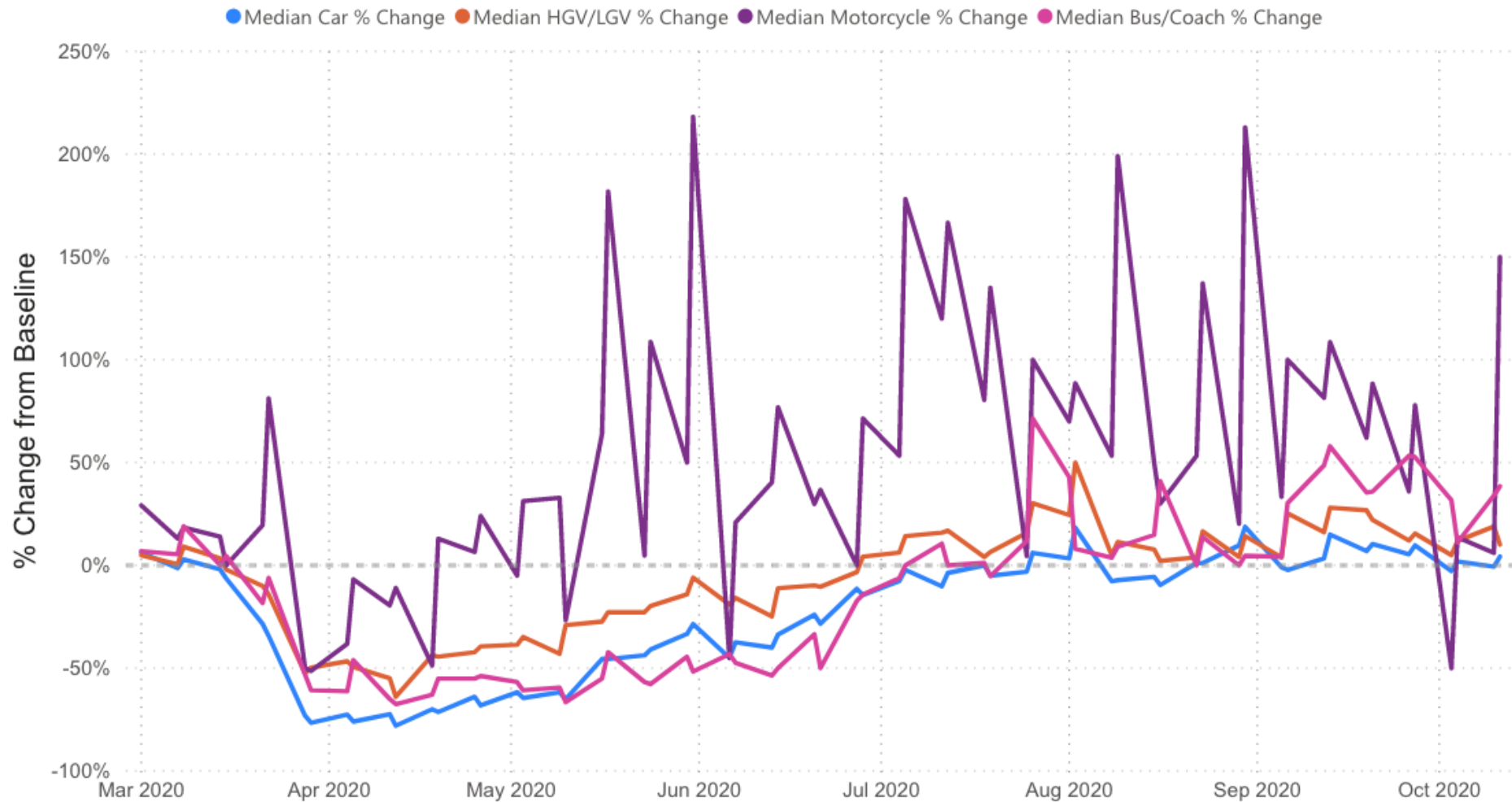


Figure 5.2: Change in average vehicle trips by vehicles class where available in the source dataset (note this data is measured at sensor level so sources with large numbers of sensors will have a greater contribution to the average)

Figure 6 – Map of tiered local COVID-19 restrictions in England

In this section of the report, we examine 5 local areas: Birmingham, Derbyshire, Hampshire, Suffolk and York. They provide a good geographic spread of areas for comparison.

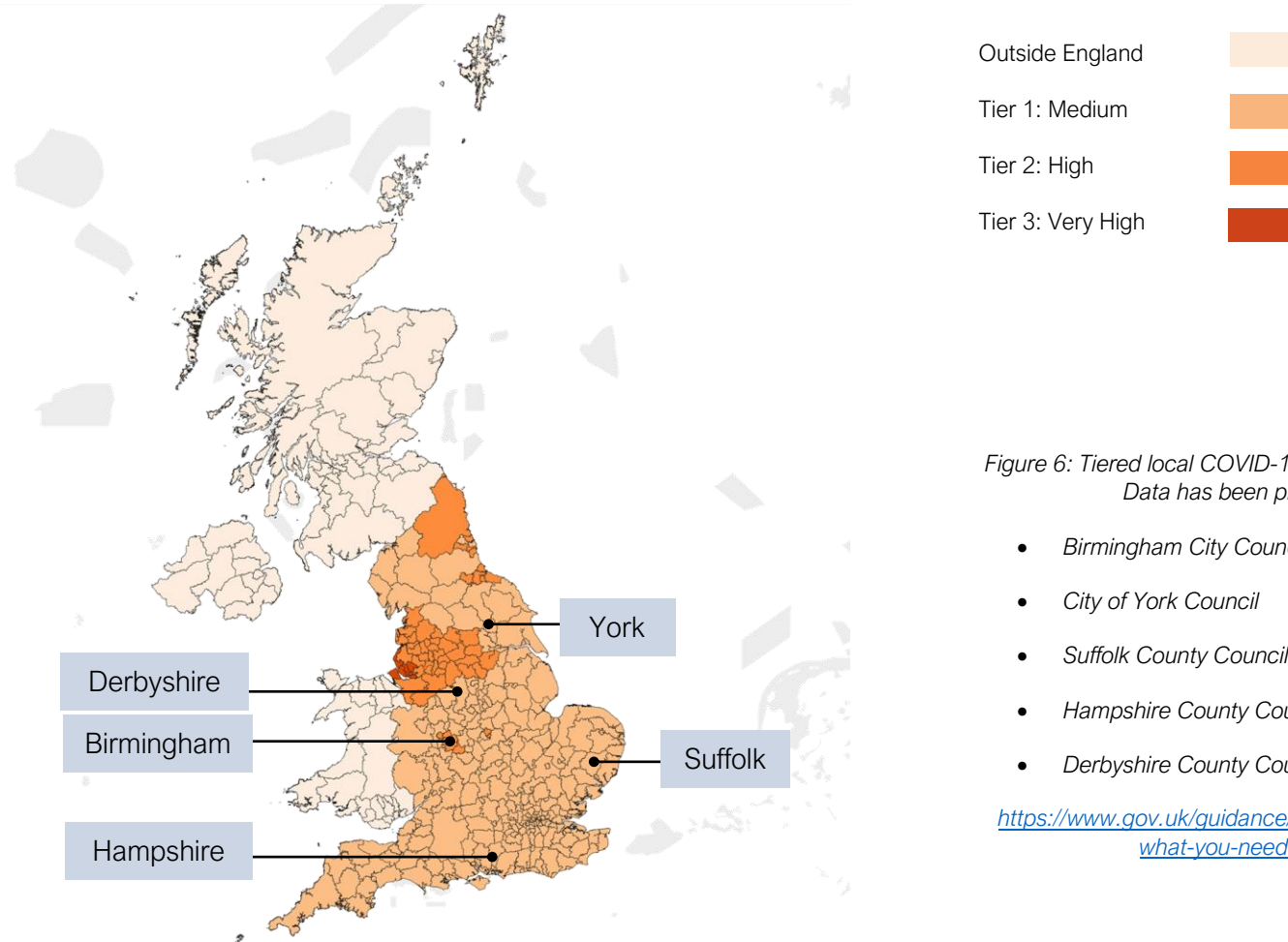


Figure 6: Tiered local COVID-19 restrictions in England.
Data has been provided by:

- Birmingham City Council
- City of York Council
- Suffolk County Council
- Hampshire County Council
- Derbyshire County Council

<https://www.gov.uk/guidance/local-covid-alert-levels-what-you-need-to-know/>

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Figure 7 – Change in daily average weekday traffic flow across a sample of Local Highway Authorities

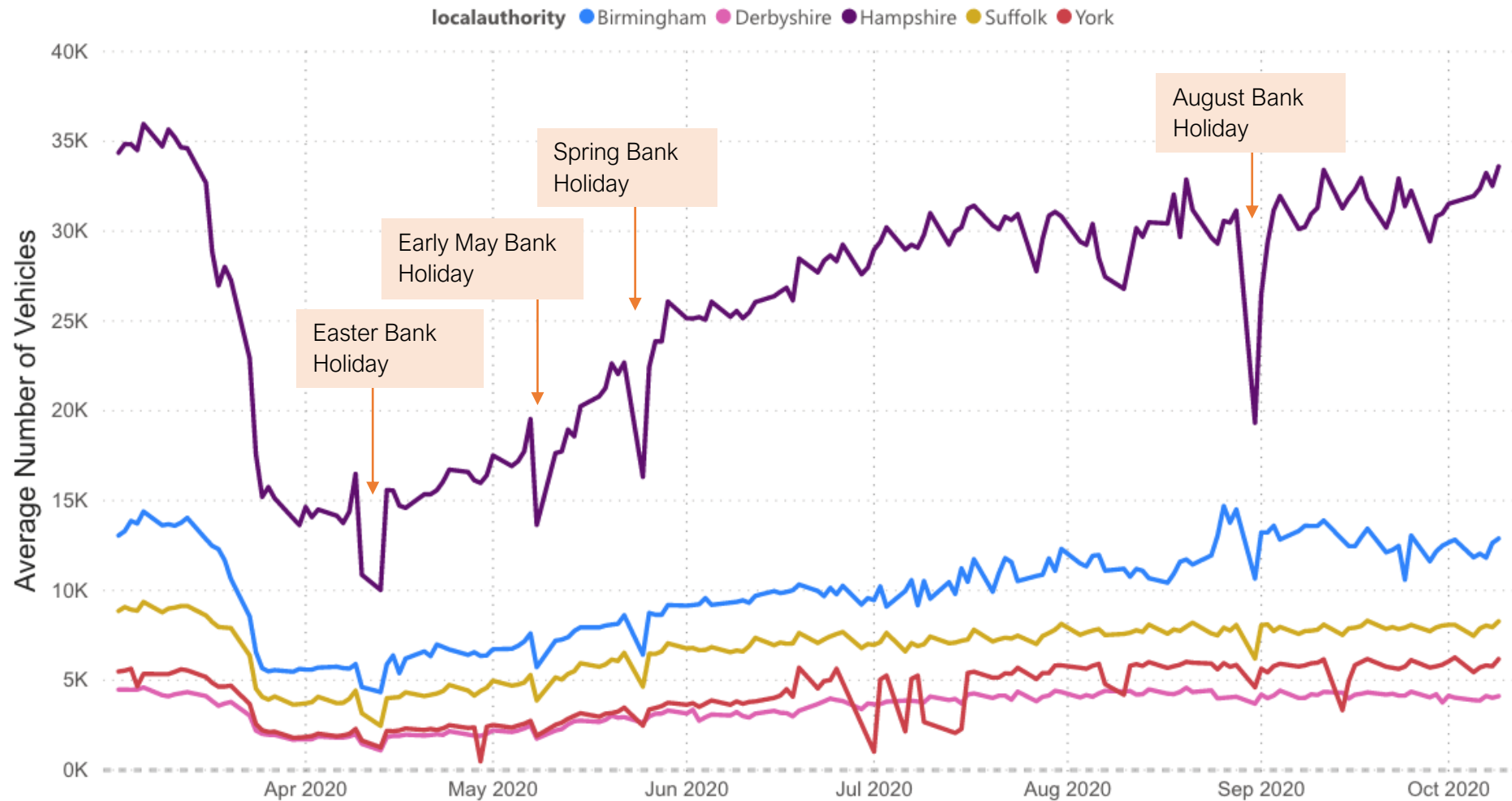


Figure 7: Change in daily average weekday traffic volumes for a selection of local authorities since 01st March compared to the baseline (first week of February 2020).

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Figure 8 – Weekday traffic volumes for a selection of local authorities

Comparing pre-lockdown (10/02/20) with early lockdown (06/04/20), the latest week (28/09/20) and the previous two weeks (14/09/20 & 21/09/20)

Week Starting ● 10/02/2020 ● 06/04/2020 ● 21/09/2020 ● 28/09/2020 ● 05/10/2020

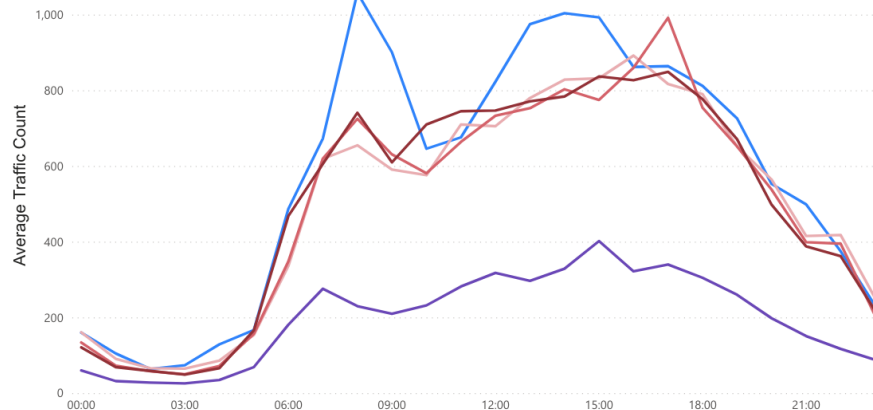


Figure 8a: Birmingham

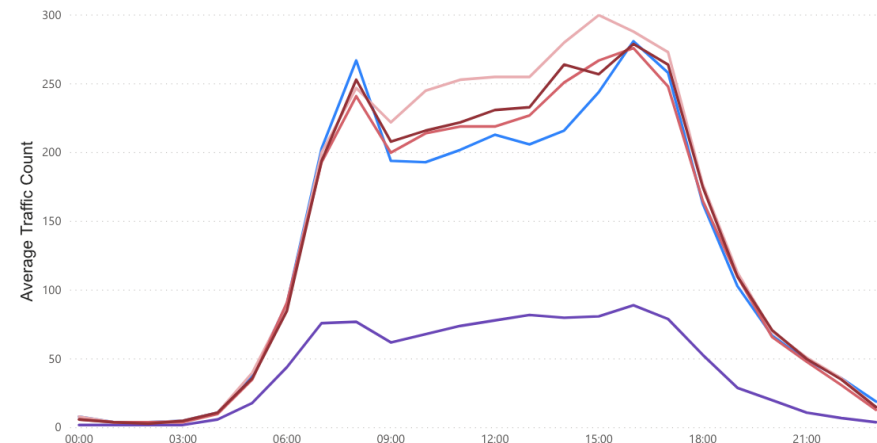


Figure 8b: Derbyshire

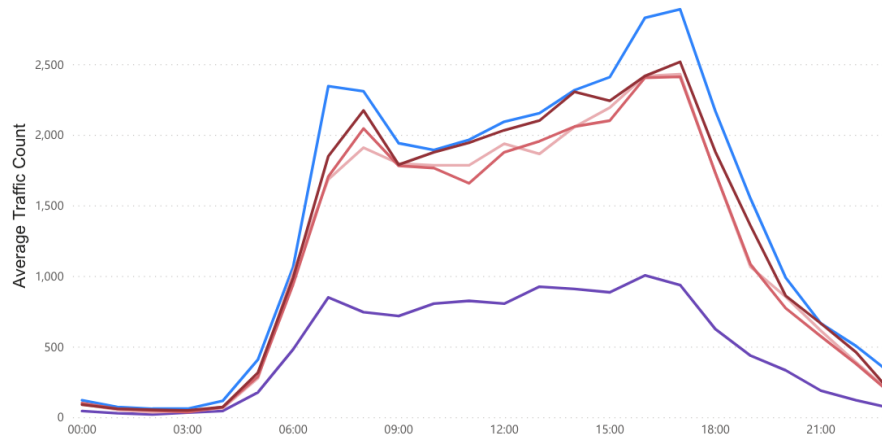


Figure 8c: Hampshire

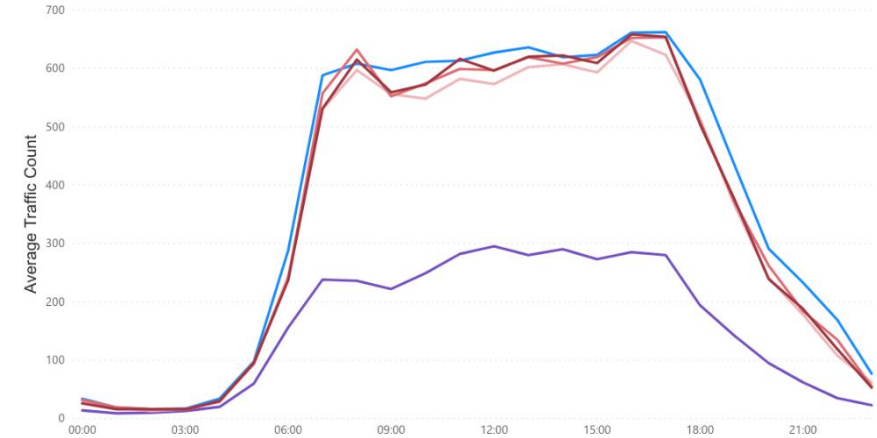


Figure 8d: Suffolk

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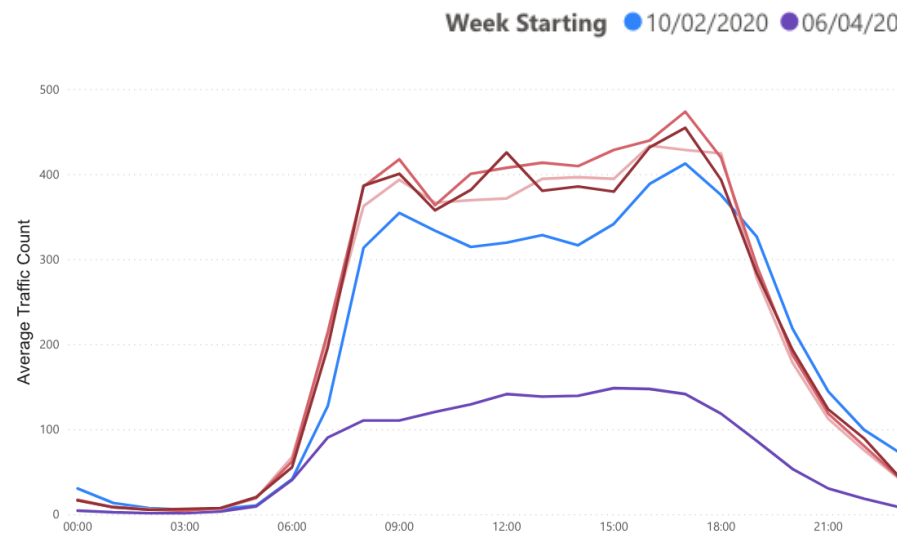


Figure 8e: City of York

- Local Highway Authority analysis shows the differences between the emerging traffic patterns across the country.
- In Birmingham (8a), there is a continued decrease in AM and inter-peak traffic levels compared with pre-lockdown. PM levels have returned to pre-lockdown levels.
- In Derbyshire (8b), inter-peak weekday traffic levels have consistently exceeded pre-lockdown levels over the previous 3 weeks.
- In Hampshire (8c), traffic has shown a general return to pre-lockdown patterns across the day, with traffic volumes almost on par with pre-lockdown levels.
- In Suffolk (8d), traffic flows have returned to pre-lockdown levels. Also notable is the lack of a significant AM or PM, peak both pre-lockdown and over the previous 3 weeks.
- In the City of York (8e), traffic flows over the previous 3 weeks have predominantly exceeded pre-lockdown levels across the day. This could be due to changes in the mode of transport travellers are using to access the City compared to pre-lockdown.

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Figure 9 – Overall average daily cycling change from baseline

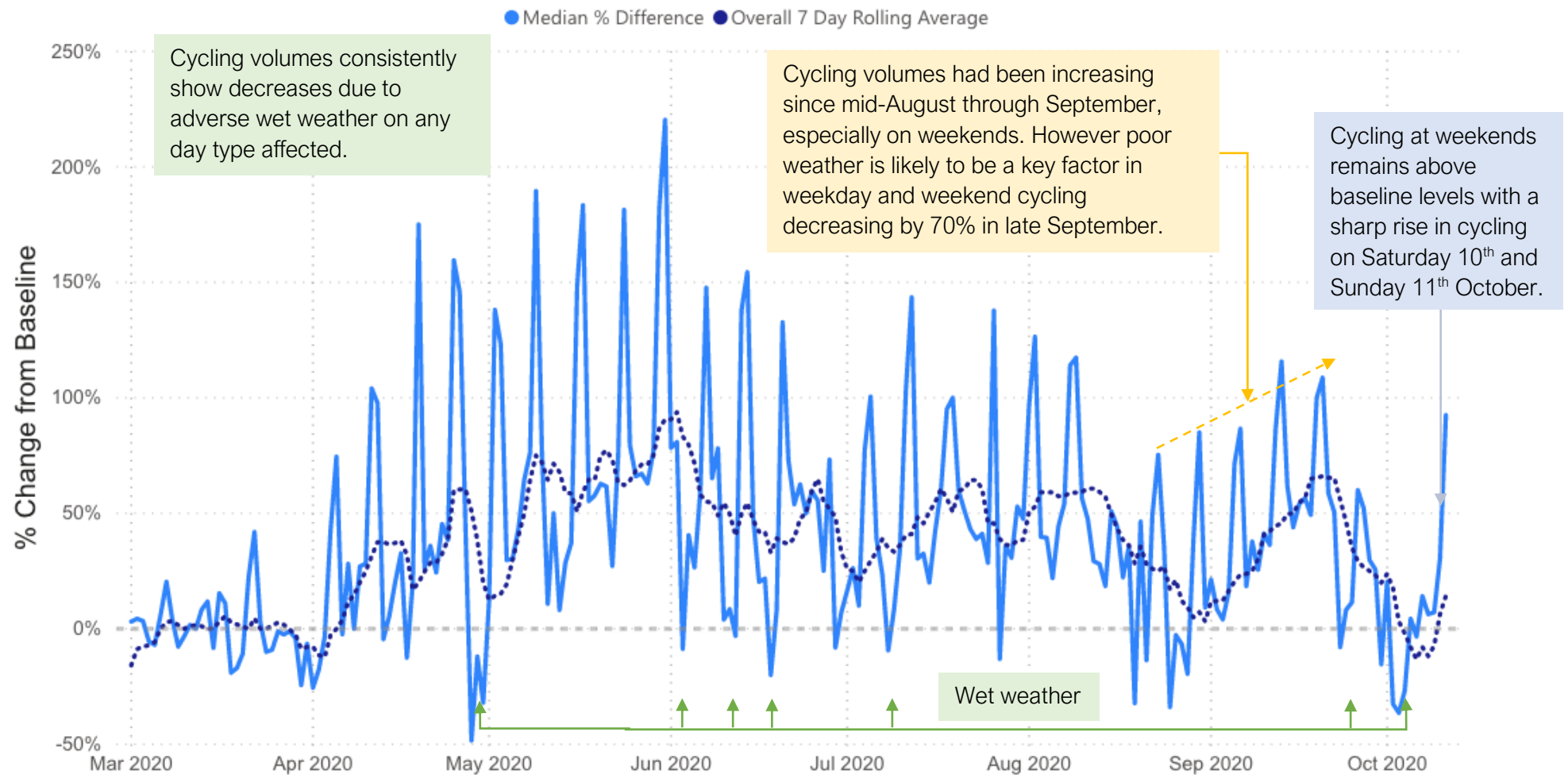


Figure 9: Change in average daily cycling volumes since 01st March (start of lockdown) across all sources compared to the baseline (first week of February 2020)

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Figure 10.1 – Overall hourly cycling comparison by week across all weekdays

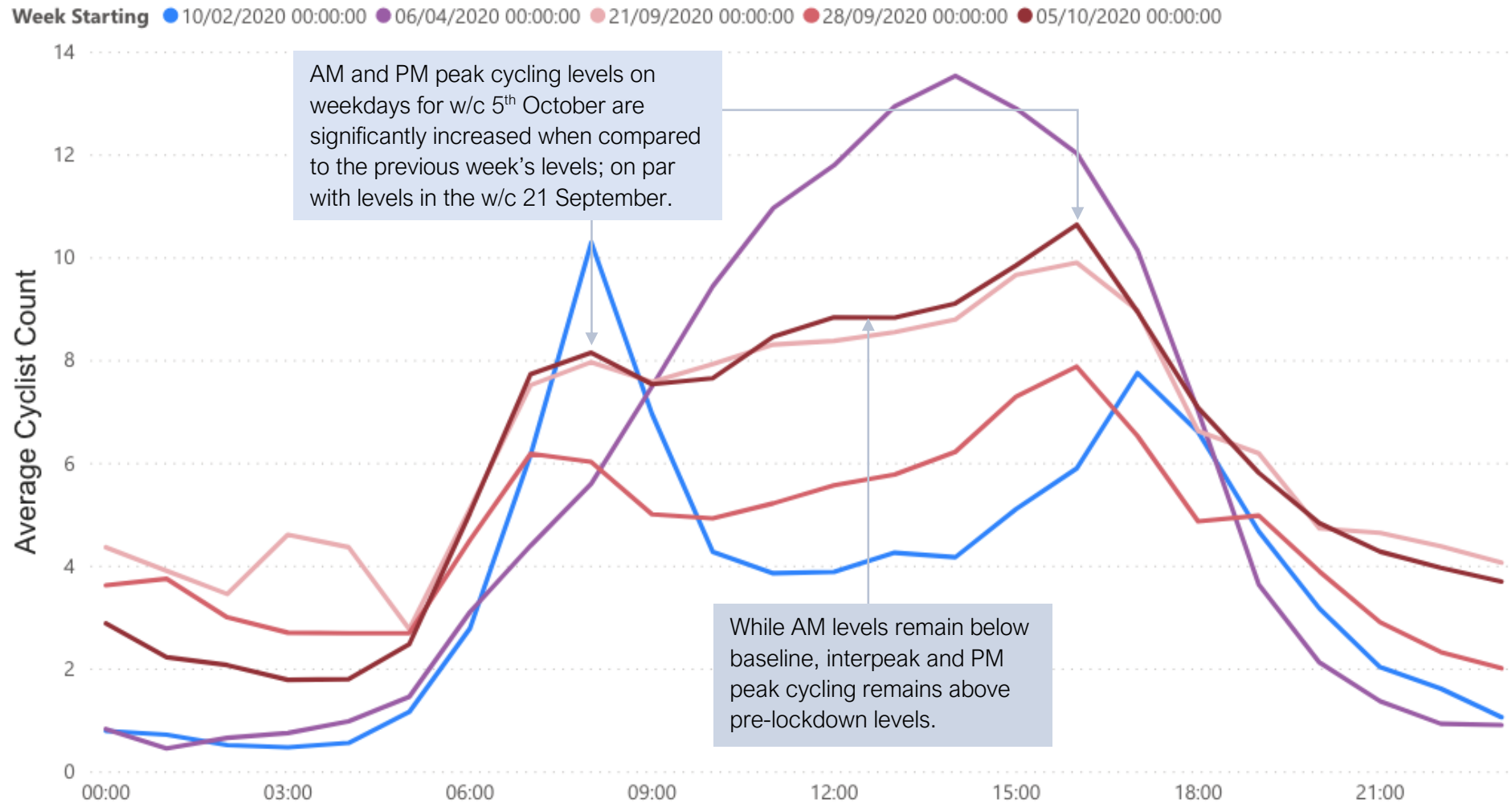


Figure 10.1: Change in average weekday (mean) hourly cycling volumes comparing pre-lockdown (10/02/20) with early lockdown (06/04/20), the latest week (28/09/20) and the previous weeks (14/09/20 & 21/09/20).

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Figure 10.2 – Overall hourly cycling comparison by week across all weekends

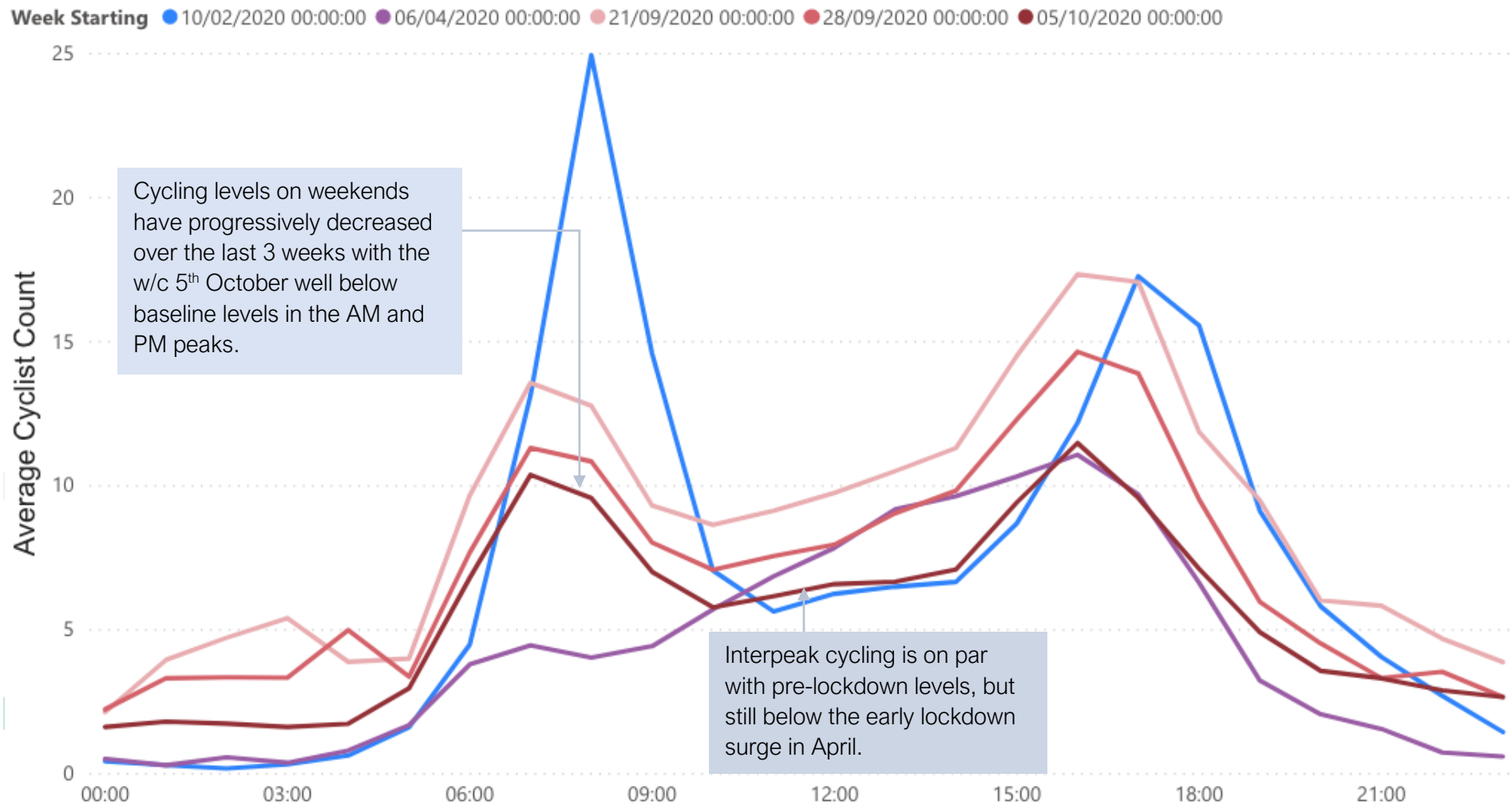


Figure 10.2: Change in average weekend (mean) hourly cycling volumes comparing pre-lockdown (10/02/20) with early lockdown (06/04/20), the latest week (05/10/20) and the previous weeks (21/09/20 & 28/09/20).

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 Authority District 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 (with the exception of Figure 7 which is a mean average)

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.

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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

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25/07/2020	Gyms and other indoor services reopen in England
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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 are implemented across different local areas in England. Liverpool placed on highest alert (Tier 3).

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@tff.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.

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.