

Burford ETRO Traffic Data Analysis Interim Report, May 2021.

Contents

1. Traffic Monitoring Interim Results	1
1.1 Impact of Covid-19.....	1
1.2 Analysis of 24 hour HGV Data.....	2
1.3 Analysis of Burford.....	5
1.4 Analysis of 2 Axle Rigid Vehicles.....	6
1.5 Analysis of Vehicles over 18t.....	10
1.6 Assessment of Success Criteria	13
1.7 Future Monitoring.....	14

This report will form part of a wider background report to support the 20 July 2021 Cabinet Paper.

1. Traffic Monitoring Interim Results

The County Council has committed to three rounds of monitoring as part of the evaluation of the impact of the Burford ETRO. This report considers the monitoring that took place in April 2019 before implementation, and six months after the scheme was implemented in February 2021 to coincide with the end of the Burford ETRO consultation period. A further monitoring period is planned for September / October 2021 to report the findings by the end of the eighteen-month ETRO period, in February 2022.

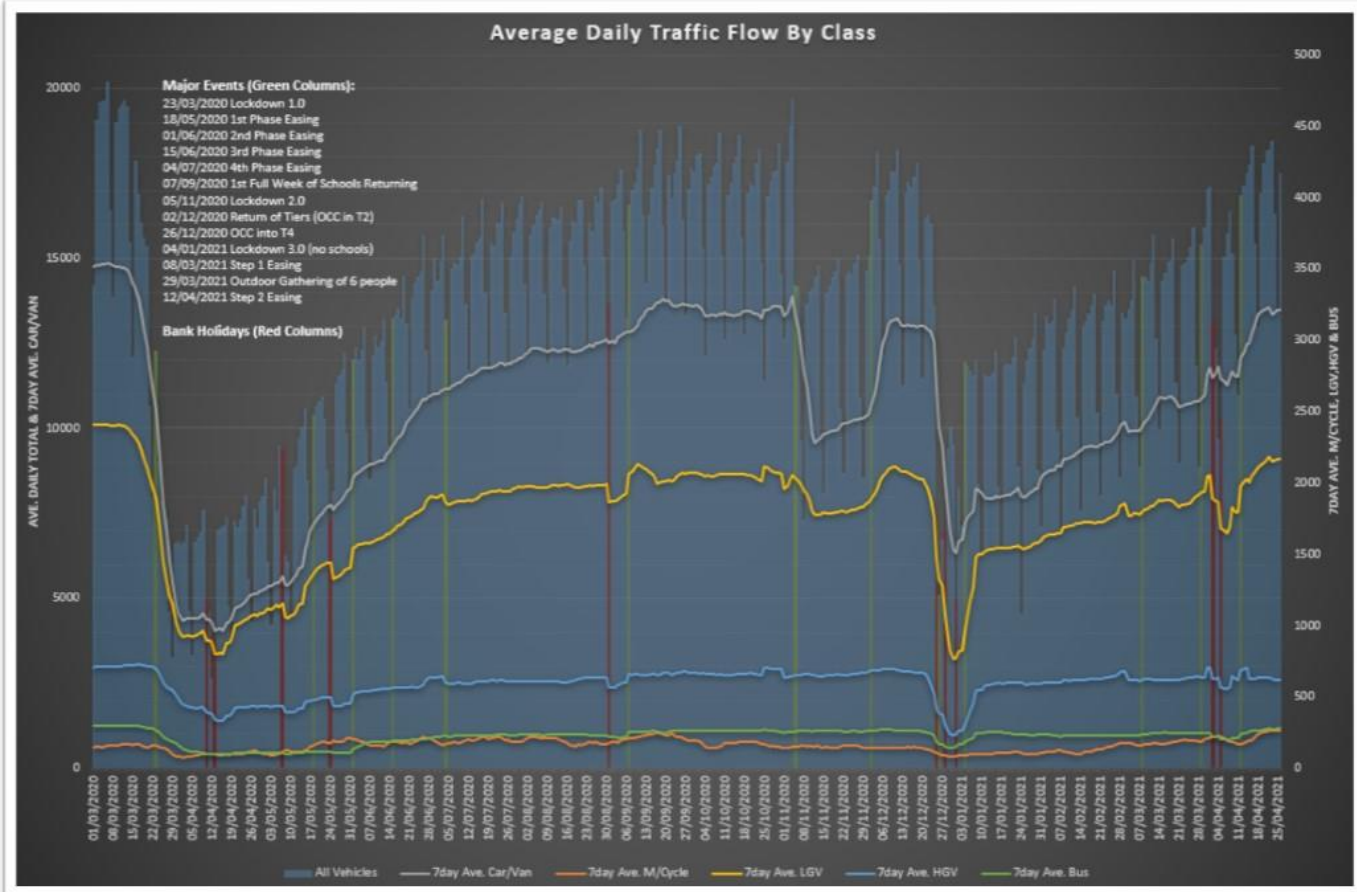
The traffic data collection has used the Department for Transport classification of HGVs. The classification groups all 2 axle HGVs together with a weigh range from 3.5t to 18t. We cannot identify from the data precisely how many HGVs are contravening the 7.5t weigh restriction. We will seek to remedy this in the next round of monitoring. The method of future traffic monitoring will be altered to use cameras to enable greater classification of 2-axle vehicles.

1.1 Impact of Covid-19

The Burford ETRO has been operational during the Covid-19 pandemic. Figure 1 shows a chart of average traffic trends for Oxfordshire from 1 March to 25 April 2021, including the 7-day average for HGV traffic. This shows that HGV traffic on average over this period has been lower than it was before the first Covid-19 lockdown in March 2020. There are noticeable reductions in HGVs during the September 2020 and the December 2020/January 2021 lockdown periods. During February 2021, when the 16 traffic counts to monitor the Burford ETRO took place, figure 1 indicates HGV traffic levels gradually increasing, but do not exceed those from before the Covid-19 pandemic.

Overall HGV traffic has not significantly increased or decreased due to Covid-19. We would therefore conclude that Covid-19 has not significantly altered the data collected during February 2021.

Figure 1: Daily traffic flow by class during Covid-19



1.2 Analysis of 24 hour HGV Data

Oxfordshire County Council commissioned Tracsis to undertake the February 2021 traffic counts at the 16 monitoring sites within the study area. Traffic volumes, and vehicle classification for all vehicles was recorded in line with Department for Transport guidance.

Table 3 and figure 2 compare the volume of all HGV's (3.5t to 44t and 2-axle to 6-axle) recorded before and after the Burford ETRO was implemented. Note monitoring at Swinbrook, Crawley and Leafield only took place in 2021.

The HGV traffic data shown in table 3 is for a 24-hour period which has been averaged from data collected over a five-weekday period, we refer to this as average daily traffic (ADT).

Table 3: Comparison of all HGV traffic data before and during ETRO

HGV Volume 24-hour 5 Day Average - Combined Directions	2019 April - Before ETRO	2021 February - During ETRO	Difference +/- (%)	
Site 1 – A361 West Street, Chipping Norton	392	292	-100	-25.5%
Site 2 – A44 New Street, Chipping Norton	510	520	+10	+2%
Site 3 – A44 High Street, Chipping Norton	629	491	-138	-21.9%
Site 4 – A361 Burford	542	541	-1	-0.2%
Site 5 - A4095 Bladon Road, Bladon Roundabout	680	426	-254	-37.4%
Site 6 - A44 Oxford Road, Bladon Roundabout	764	871	+107	+14%
Site 7 – A4095 Upper Campsfield Road, Bladon Roundabout	572	458	-114	-19.9%
Site 8 – A4095 Bridge Street, Witney	619	707	+88	+14.2%
Site 9 – B4022 West End, Witney	145	262	+117	+80.7%
Site 10 – A4095 Woodgreen, Witney	340	323	-17	-5%
Site 11 – B4022 Newland, Witney	405	448	+43	+10.7%
Site 12 – B4022 Witney Road, Hailey	223	168	-55	-24.7%
Site 13 - A436, Between Stow-on-the-Wold and Chipping Norton	312	265	-47	-15.1%
Site 14 – UC Fairspear Road, Leafield	n/a	58		
Site 15 – UC road, Swinbrook	n/a	24		
Site 16 – UC Dry Lane, Crawley	n/a	111		

Figure 2: Comparison of HGV traffic data before and during Burford ETRO

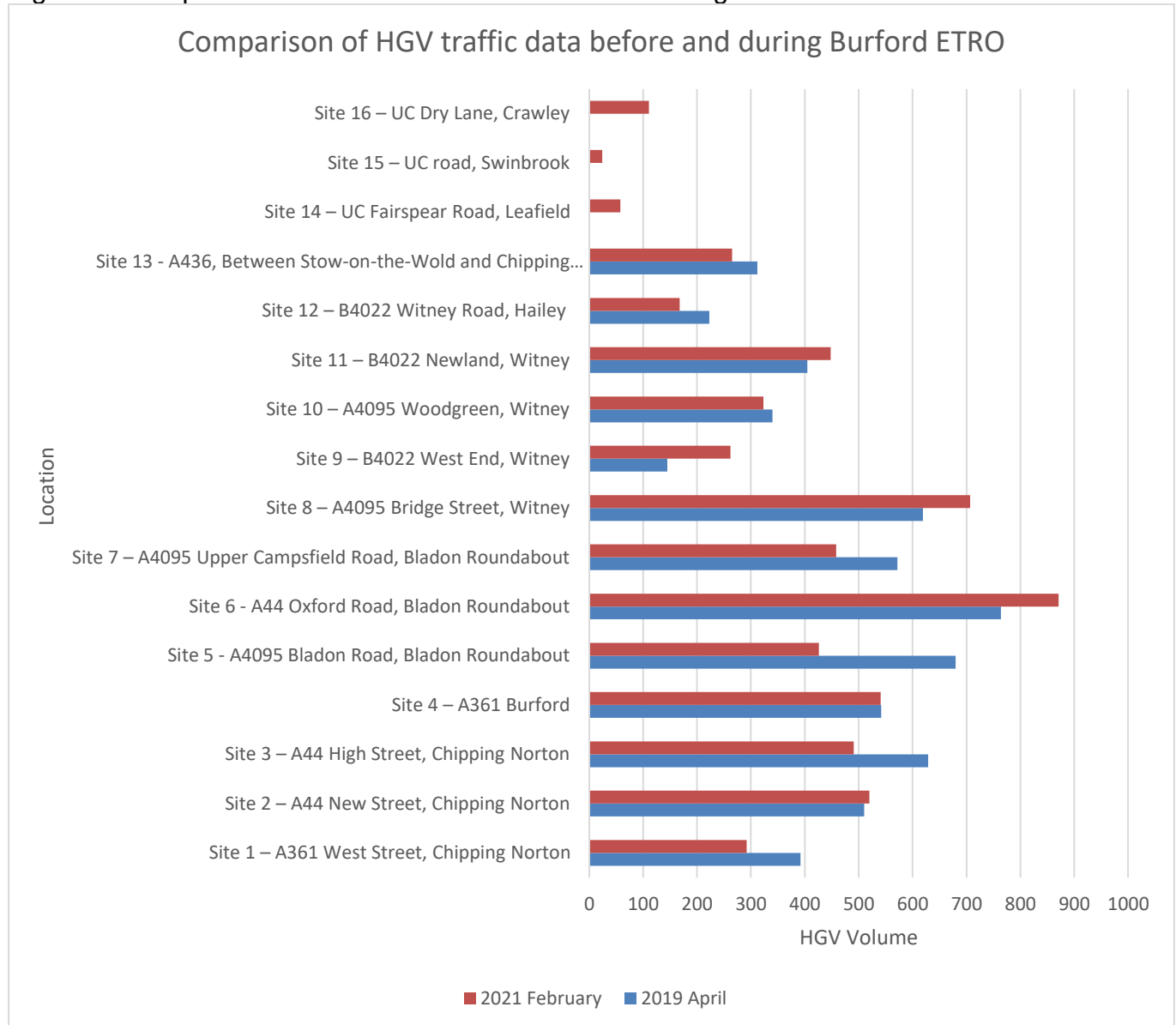


Table 3 and figure 2 shows that the same level of HGVs is recorded at A361 Burford before the ETRO was implemented as there has been after.

Overall, of the 13 locations with before and after monitoring data, 6 of these have seen decreases in HGV volumes, three locations have recorded approximately the same volume (+/-5%) and four locations have seen an increase in HGVs. Locations with an HGV increase are:

- A44 Oxford Road, Bladon Roundabout (+14%);
- A4095 Bridge Street, Witney (+14%);
- B4022 West End, Witney (+80%); and
- A4095 Newland, Witney (+11%).

All of these locations are considered to be on the alternative route HGVs should take to avoid the weight restrictions at A361 Burford.

The data appears to indicate that at Chipping Norton fewer HGVs are routing north south to/from the A361 as data for A361 West Street and A44 High Street shows a reduction.

The increase recorded at A44 Oxford Road, Bladon Roundabout coupled with the reductions, or no change at Chipping Norton may indicate HGVs are using the A44 through Woodstock rather than the A44/A361 through Chipping Norton due to the Burford ETRO.

It is not clear if the reductions on the A4095 at Bladon Roundabout (both Bladon Road and Upper Campsfield Road) are related to the Burford ETRO, as this route is not a direct alternative to Burford.

A weight restriction imposed by Gloucestershire County Council on the A436 at Adlestrop may explain the decrease in HGVs recorded on this route.

1.3 Analysis of Burford

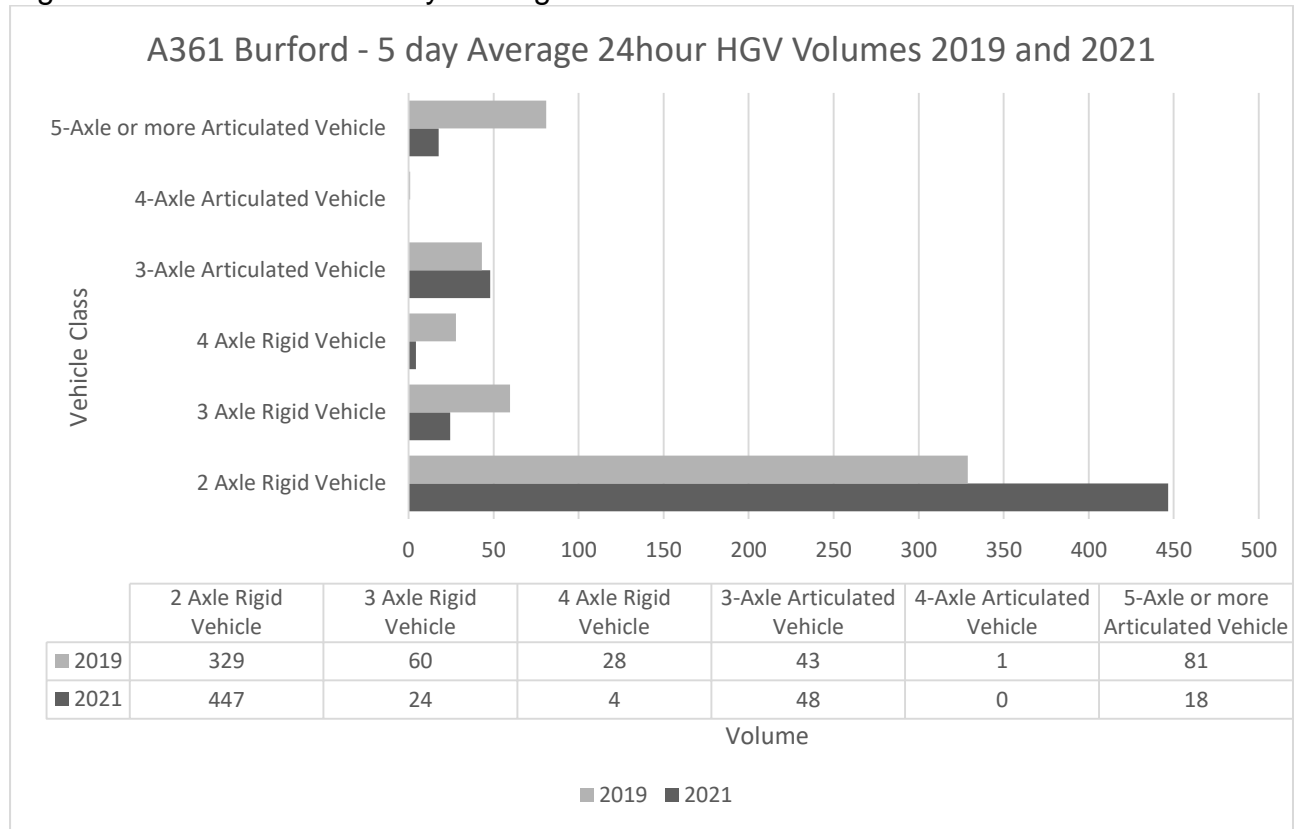
Figure 3 compares the composition of HGV class recorded at A361 Burford during 2019 and 2021. The data shows that since the Burford ETRO was implemented there has been a significant reduction in 5 axle or more articulated vehicles, with a reduction of around 60 per day recorded. Similarly, 4 axle rigid and 3 axle rigid vehicles have also reduced. A very small increase is noted in 3 axle articulated vehicles from 43 per day in 2019 to 48 in 2021. However, the largest increase has been seen in 2 axle-rigid vehicles, which has increased from 329 per day in 2019 to 447 in 2021 (36% increase).

It should be noted that 2 axle-rigid HGVs are categorised into two groups. Smaller 2-axle lorries with a UK maximum gross weight over 3.5t and up to 7.5t, and bigger 2-axle lorries over 7.5t and up to 18t. The traffic data presented here groups these two categories together into one group of 2-axle HGVs.

We can't say from the data how many of the 447 2-axle vehicles recorded at A361 Burford in 2021 are 3.5t, 7.5t or 18t, as they are all grouped together.

It is possible that due to the implementation of the Burford ETRO that haulage and freight operators have increased their use of 3.5t or 7.5t vehicles to operate within the restrictions.

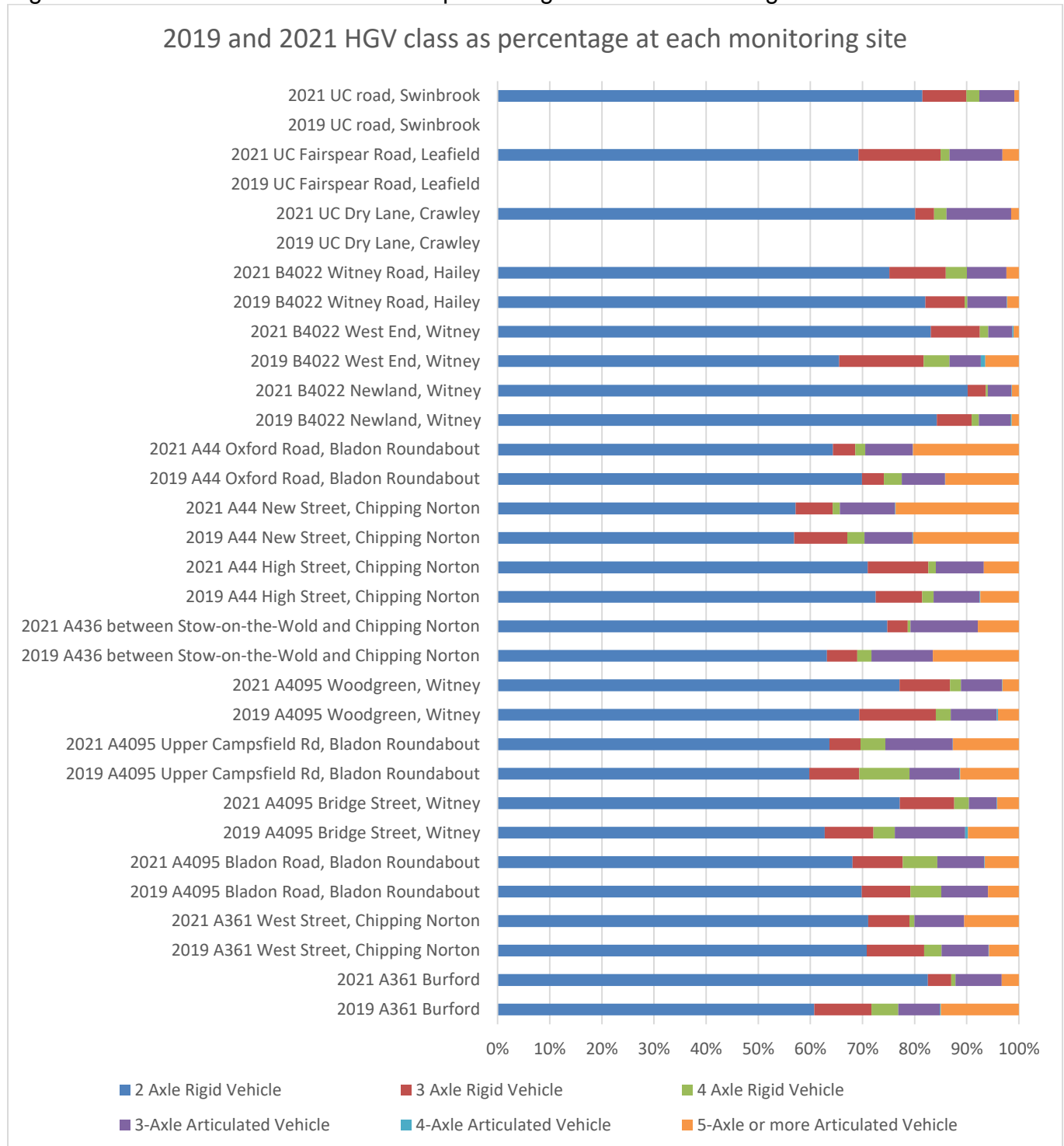
Figure 3: A361 Burford - 5 day Average 24hour HGV Volumes 2019 and 2021



1.4 Analysis of 2 Axle Rigid Vehicles

In terms of prevalence, 2 Axle Rigid Vehicles are the most prevalent HGV classed vehicle. All the survey sites recorded over 55% of the HGVs as being 2 Axle Rigid Vehicles. In the case of B4022 Newland, Witney, 2 Axle Rigid Vehicles accounted for 90% of HGVs recorded (see figure 4). As noted above, 2 Axle Rigid Vehicles can have a UK maximum gross weight of 18t.

Figure 4: 2019 and 2021 HGV class as percentage at each monitoring site



Burford has witnessed a significant increase in 2 axle rigid vehicles between the two surveys. This trend is not universal across all the monitoring sites, as shown in figure 5.

The largest increases in 2 axle rigid vehicles are at:

- A361 Burford;

- A4095 Bridge Street, Witney;
- B4022 West End, Witney;
- A4095 Woodgreen, Witney; and
- B4022 Newland, Witney.

Smaller increases noted at:

- A44 New Street, Chipping Norton; and
- A44 Oxford Road, Bladon roundabout.

It is notable that all the sites where a decrease in HGVs overall were recorded, also have a decrease in 2 axle rigid vehicles with the exception of the A436 between Stow-on-the-Wold and Chipping Norton, which has recorded around the same number of 2 axle rigid vehicles.

Figure 5: 2019 and 2021 Comparison of 2 axle vehicles only

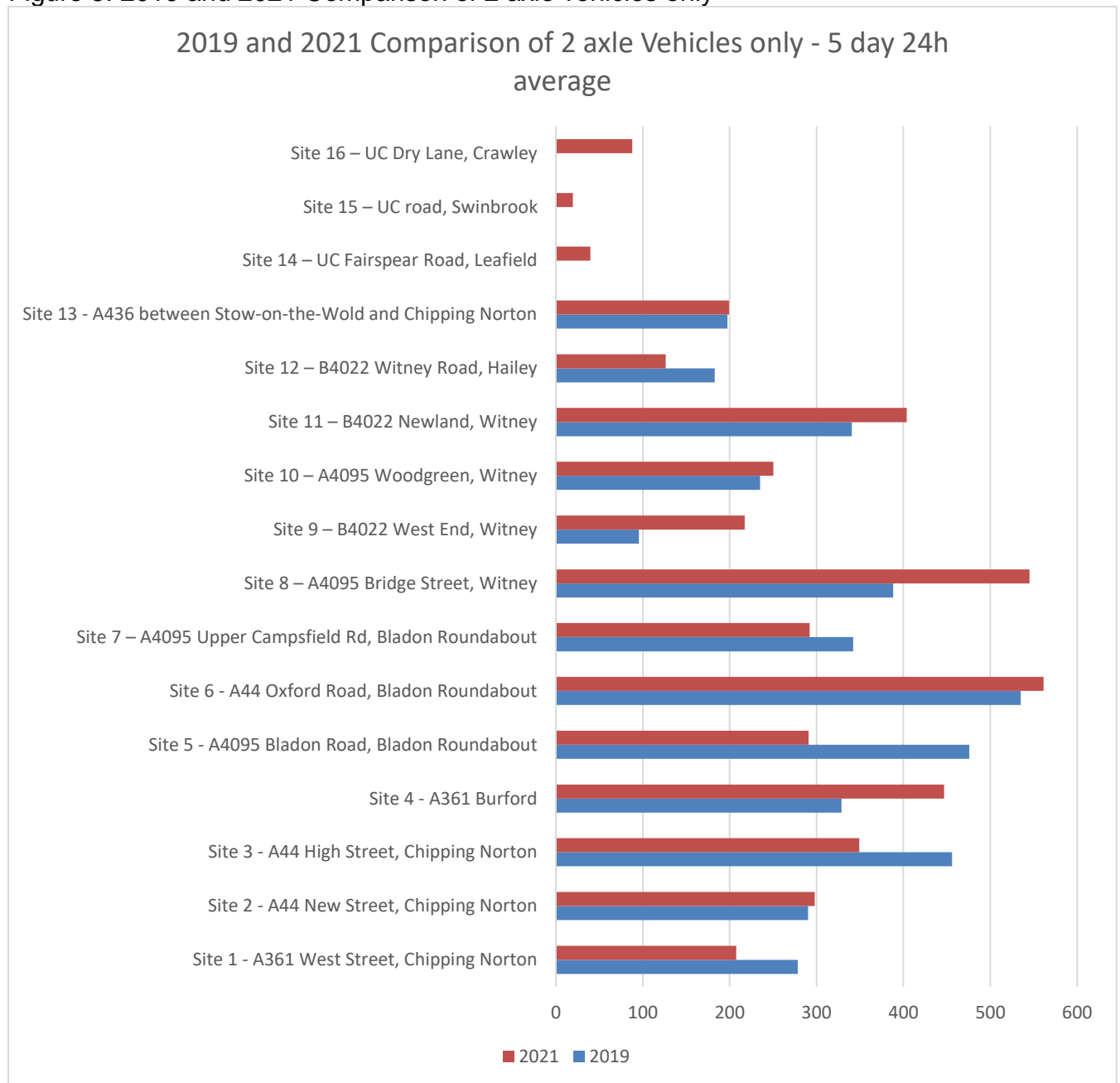


Table 4: Volume and percentage change of 2 Axle Rigid Vehicles only

Volume of 2 Axle Rigid Vehicles only 24-hour 5 Day Average - Combined Directions	2019 April - Before ETRO	2021 February - During ETRO	Difference +/- (%)	
Site 1 - A361 West Street, Chipping Norton	278	207	-71	-25%
Site 2 - A44 New Street, Chipping Norton	290	298	8	3%
Site 3 - A44 High Street, Chipping Norton	456	349	-107	-23%
Site 4 - A361 Burford	329	447	118	36%
Site 5 - A4095 Bladon Road, Bladon Roundabout	476	291	-185	-39%
Site 6 - A44 Oxford Road, Bladon Roundabout	535	561	26	5%
Site 7 – A4095 Upper Campsfield Rd, Bladon Roundabout	342	292	-50	-15%
Site 8 – A4095 Bridge Street, Witney	388	545	157	40%
Site 9 – B4022 West End, Witney	95	217	122	128%
Site 10 – A4095 Woodgreen, Witney	235	250	15	6%
Site 11 – B4022 Newland, Witney	341	404	63	18%
Site 12 – B4022 Witney Road, Hailey	183	126	-56	-31%
Site 13 - A436 between Stow-on-the-Wold and Chipping Norton	197	199	2	1%
Site 14 – UC Fairspear Road, Leafield	0	40		
Site 15 – UC road, Swinbrook	0	19		
Site 16 – UC Dry Lane, Crawley	0	88		

Table 4 shows the percentage change in 2 Axle Rigid Vehicles only. This shows increases over 50% at: B4022 West End, Witney, where a 128% increase has been recorded.

It is highly likely that the increase of 128% seen at B4022 West End, Witney and the increase of 40% at A4095 Bridge Street, Witney of 2 Axle Rigid Vehicles are due to the Burford ETRO as the Witney route is the only remaining A-road route across the River Windrush, now the Burford ETRO is in place. Whilst not all 2 Axle Rigid Vehicles are 7.5t, those that are, are impacted by the Burford ETRO and would need to find an alternative route.

None of the sites have seen a 50% or more decrease in 2 Axle Rigid Vehicles.

1.5 Analysis of Vehicles over 18t

Table 5 and figure 6 shows the volume of HGVs over 18t at the 16 survey sites. These are vehicles that have 3 axles or more.

Burford has seen a significant decrease, at -56%, in HGVs over 18t between 2019 and 2021, likely to be due to the implementation on the ETRO.

Other notable decreases in HGVs over 18t are at:

- A361 West Street, Chipping Norton;
- A44 High Street, Chipping Norton;
- A4095 Bladon Road, Bladon Roundabout;
- A4095 Upper Campsfield Road, Bladon Roundabout;

- A4095 Bridge Street, Witney;
- B4022 West End, Witney;
- A4095 Woodgreen, Witney;
- B4022 Newland, Witney;
- A436 between Stow-on-the-Wold and Chipping Norton.

No change (+/-5%) at:

- A44 New Street, Chipping Norton; and
- B4022 Witney Road, Hailey.

Increases at:

- A44 Oxford Road, Woodstock Roundabout at +35%;

The increase recorded at A44 Oxford Road, Bladon Roundabout coupled with a the reductions, or no change at Chipping Norton may indicate vehicles that have 3 axles or more are using the A44 through Woodstock rather than the A44/A361 through Chipping Norton due to the Burford ETRO.

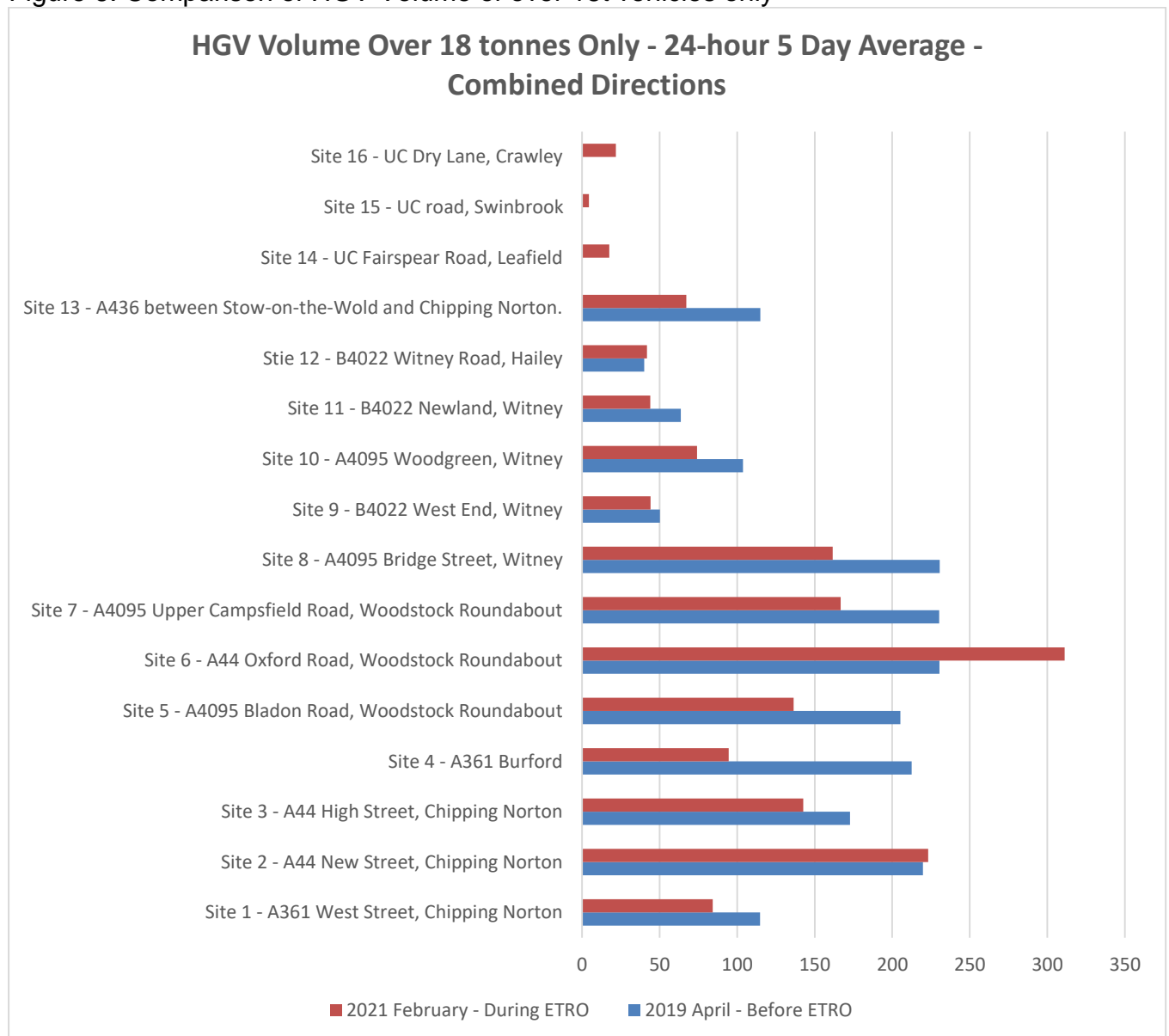
The Burford ETRO doesn't explain the reduction in vehicles that have 3 axles or more at all the other sites where reductions have been recorded, particularly those at Witney, where overall increases have been witnessed.

It is notable that the increases in 2 axle HGVs seen at seven of the monitoring sites have not also witnessed an increase in 3 axle and above HGVs. We do not know if this is true of Swinbrook, Leafield and Crawley due to the absence of before data.

Table 5: Comparison of HGV traffic data before and during ETRO vehicles over 18t.

HGV Volume (Over 18 tonnes) 24-hour 5 Day Average - Combined Directions	2019 April - Before ETRO	2021 February - During ETRO	Difference +/- (%)	
Site 1 - A361 West Street, Chipping Norton	115	84	-31	-27%
Site 2 - A44 New Street, Chipping Norton	220	223	3	2%
Site 3 - A44 High Street, Chipping Norton	173	143	-30	-17%
Site 4 - A361 Burford	213	95	-118	-56%
Site 5 - A4095 Bladon Road, Bladon Roundabout	205	136	-69	-34%
Site 6 - A44 Oxford Road, Bladon Roundabout	230	311	81	35%
Site 7 - A4095 Upper Campsfield Road, Bladon Roundabout	230	167	-63	-28%
Site 8 - A4095 Bridge Street, Witney	231	162	-69	-30%
Site 9 - B4022 West End, Witney	50	44	-6	-12%
Site 10 - A4095 Woodgreen, Witney	104	74	-30	-29%
Site 11 - B4022 Newland, Witney	64	44	-20	-31%
Site 12 - B4022 Witney Road, Hailey	40	42	2	4%
Site 13 - A436 between Stow-on-the-Wold and Chipping Norton.	115	67	-48	-42%
Site 14 - UC Fairspear Road, Leafield	n/a	18	N/A	
Site 15 - UC road, Swinbrook	n/a	4	N/A	
Site 16 - UC Dry Lane, Crawley	n/a	22	N/A	

Figure 6: Comparison of HGV Volume of over 18t vehicles only



1.6 Assessment of Success Criteria

Review of total HGVs

When referring to the success criteria the data shows that overall HGV volumes at Burford when comparing 2019 with 2021 do not meet the 50% reduction criteria. The HGV traffic volume data collected in April 2019 at Burford before the ETRO was implemented showed a total volume of 542 vehicles ADT. Data collected in February 2021, after the ETRO was implemented, recorded 541 HGVs ADT. This data appears to show the ETRO has made no difference to the total volume of HGVs traversing Burford High Street.

Of the monitoring sites where there have been negative impacts of 50% or more, the B4022 West End, Witney, has seen an increase in HGVs of 80% from 145 in April 2019 to 262 in Feb 2021. This site is within the air quality management area. Officers consider B4022 West End, Witney, to be on a route which is likely to be used as an alternative route for traffic avoiding the weight restriction at Burford and is the confluence of traffic from Crawley/Leaffield and Chalbury/Chipping Norton/ Enstone. Although, the data for the B4022 Witney Road, Hailey monitoring site north of B4022 West End, Witney (the Chalbury/Chipping Norton/ Enstone route), shows a decrease in HGVs of 25% from 223 in 2019 to 168 in 2021.

We do not have any before data from Leaffield, Swinbrook or Crawley as pre-monitoring was not carried out there to assess if they meet the assessment criteria. However, we see from the consultation responses that these communities indicate there has been increased HGV routing in these places. It is the officer's opinion that the volume of HGV vehicles at 58 per day in Leaffield and 111 in Crawley seems high for locations of this type.

Review of 2 axle and 3 axle or more vehicle groups

The data shows that at A361 Burford the composition of HGV classification is different between the two survey periods. Whilst there has been an increase at A361 Burford in 2 axle HGVs of 36%, there has been a reduction of -56% in 3 axle vehicles and above. Therefore, the data shows vehicles with 3 axle vehicles and above (those over 18t) do meet the success criteria, although this was not originally stipulated as a criterion.

In terms of negative impacts, the percentage change data in 2 Axle Rigid Vehicles shows increases over 50% at B4022 West End, Witney, where a 128% increase has been recorded in the air quality management area.

None of the monitoring sites recorded a 50% or more increase in 3 axle vehicles and above (those over 18t). The highest recorded was 35% at A44 Oxford Road, Bladon Roundabout.

1.7 Future Monitoring

A further monitoring period is planned for September / October 2021 in order to report the findings by the end of the eighteen months ETRO period, in February 2022. It is recommended that future surveys use camera technology to be able to record greater information about the gross weight of 2 axle vehicles.