Lancashire Central – Base year traffic flow assumptions

DATE	**08 June 2023**
TO	**LCC Highways / National Highways**
FROM	**WSP Development – HB / JO**
SUBJECT	**70084465 - Lancashire Central – Base year traffic flow assumptions**

Traffic flows for a 2024 Base Year are to be used for the LinSig base modelling of the following junctions:

- A582/Stanifield Lane
- A582/A6
- A6/Cuerden Way/Craven Drive
- A6/A49 Wigan Road/Station Rd
- A6/M6 J29

Traffic surveys from June 2016 were obtained for these junctions from the previous Cuerden application.

WebTRIS comparison

As presented in the 'Lancashire Central - Response to NH - March 2023' note, WebTRIS has been used to obtain available data in the local area which has been compared to the 2016 survey data. Where available, WebTRIS data from May 2022 has been used as a comparison to the 2016 data, with an average of peak hours flows from Tuesday, Wednesday and Thursday survey days in May 2022 obtained from the database.

Table 1 summarises the comparison in total peak hour vehicle flow between the 2016 data and 2022 WebTRIS data.

Table 1 - Comparison of Survey Data with 2022 WebTRIS data

	2022 WebTRIS Data		2016 Survey Data		% Difference	
	AM Peak (07:30-08:30)	PM Peak (16:30-17:30)	AM Peak (07:30-08:30)	PM Peak (16:30-17:30)	AM Peak (07:30-08:30)	PM Peak (16:30-17:30)
M65 Terminus Eastern Arm (EB): M65/4007A and M65/4007J*	1,873	2,003	1,940	1,992	+4%	-0.5%
M65 Terminus Eastern Arm (WB)	No WebTRIS Data available for comparison					
M65/M6 Junction Eastern Arm (EB) M65/4014K	1,213	1,102	1,284	1,260	+6%	+14%
M65/M6 Junction Eastern Arm (WB) M65/4017L)	1,135	1,304	1,288	1,258	+13%	-3.6%
M6/A6 Junction SB Off-slip (M6/7446L)	828	985	702	948	-15%	-3.7%

M6/A6 Junction NB On-slip (M6/7450A minus M6/7438A)	1,040	875	1,138	878	+9.4%	+0.3%

The peak hour flows from the 2016 surveys are generally higher than the more recently observed flows from the WebTRIS database in both the morning and evening peak periods.

In addition to the above, where available, data from WebTRIS sites for March 2023 have also been obtained for a further source of comparison. The average traffic flows from Tuesday, Wednesday and Thursday survey days were used for the comparison. The results are provided in Table 2 below.

Table 2 - Comparison of Survey Data with 2023 WebTRIS data

	2023 WebTRIS Data		2016 Survey Data		% Difference	
	AM Peak (07:30-08:30)	PM Peak (16:30-17:30)	AM Peak (07:30-08:30)	PM Peak (16:30-17:30)	AM Peak (07:30-08:30)	PM Peak (16:30-17:30)
M65 Terminus Eastern Arm (EB): M65/4007A and M65/4007J*	No WebTRIS Data available for comparison					
M65 Terminus Eastern Arm (WB)						
M65/M6 Junction Eastern Arm (EB) M65/4014K	1,259	1,158	1,284	1,260	+2%	+9%
M65/M6 Junction Eastern Arm (WB) M65/4017L)	1,282	1,336	1,288	1,258	+0.5%	-6%
M6/A6 Junction SB Off-slip (M6/7446L)	825	968	702	948	-15%	-2%
M6/A6 Junction NB On-slip (M6/7450A minus M6/7438A)	993	738	1,138	878	+15%	+19%

The peak hour flows from the 2016 surveys are generally higher than the March 2023 traffic flows from the WebTRIS database in both the morning and evening peak periods.

DfT counts comparison

DfT counts from the A582 and north of M65 terminus have also been used to compare survey flows with more recent traffic flows on the local highway network surrounding the development site. Two-way peak hour vehicle flows for the most recent available survey days in each location have been used.

Table 3 - Comparison of Survey Data with DfT data counts

	DfT Data		2016 Survey Data		% Difference	
	AM Peak (07:30-08:30)	PM Peak (16:30-17:30)	AM Peak (07:30-08:30)	PM Peak (16:30-17:30)	AM Peak (07:30-08:30)	PM Peak (16:30-17:30)
A582 DfT Count 48595 (June 2021)	3,341	3,806	4,216	4,263	+26%	+12%
North of M65 Terminus DfT Count 99554 (March 2021)	3,136	3,144	4,373	4,093	+39%	+30%

Table 3 shows that at both locations, the 2016 survey data was higher than the 2021 DfT counts.

The above peak hour traffic analysis from more recent WebTRIS and DfT data counts confirm that the 2016 survey data provides a robust assessment of worst-case baseline traffic flows.

LCC Highways traffic data provision

In addition to the above, LCC Highways have provided WSP with the latest traffic data they have record of at various locations on the local highway network. Recent data provided from 2022 has been used for comparison. The 2016 peak hour traffic data has been compared to the data provided by LCC and is summarised in Table 4 below.

Table 4 - Comparison of Survey Data with data provided by LCC Highways

	LCC Highway data provision		2016 Survey Data		% Difference	
	AM Peak (07:30-08:30)	PM Peak (16:30-17:30)	AM Peak (07:30-08:30)	PM Peak (16:30-17:30)	AM Peak (07:30-08:30)	PM Peak (16:30-17:30)
Stanifield Lane NB (Nov 2022)	419	422	668	564	+60%	+34%
Stanifield Lane SB (Nov 2022)	391	428	599	700	+53%	+63%
Farington Rd (W of Fowler Ln) EB (March 2022)	731	736	1,164	1,077	+59%	+46%
Farington Rd (W of Fowler Ln) EB (March 2022)	686	673	1,172	1,301	+71%	+93%

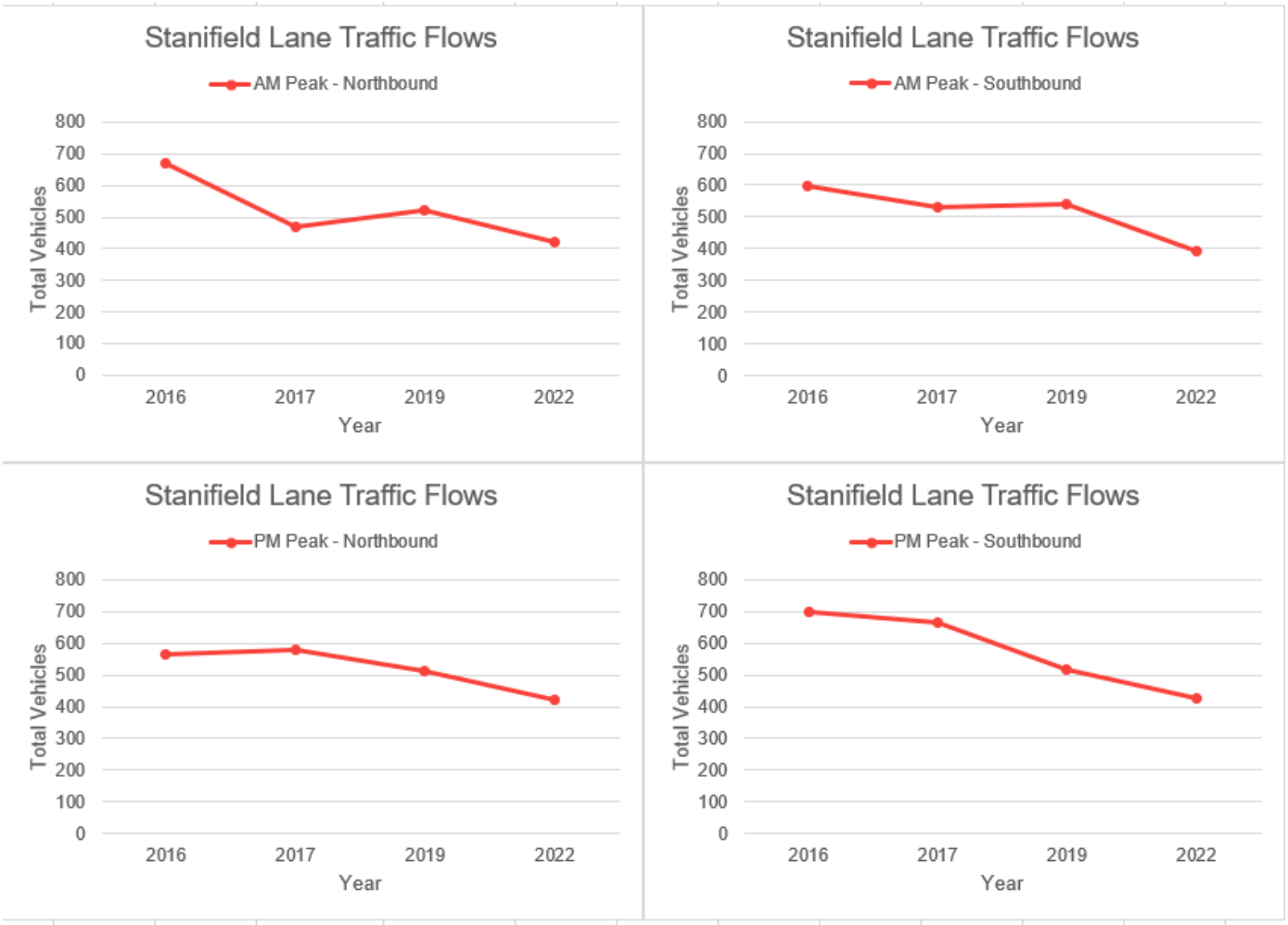
The peak hour flows from the 2016 surveys are significantly higher than the more recent 2022 traffic flows in both the morning and evening peak periods in the above locations.

Recent data trends

Traffic data is available for Stanifield Lane from the years 2016, 2017, 2019 and 2022**.** While it is noted that this is at a single location on the local network, it provides an indication of likely trends in traffic flows on the

local network over the past 6 years. The trend in traffic flows northbound and southbound during the AM and PM peak at this location is shown in Figure 1 below.

Figure 1 - Comparison of traffic flows on Stanifield Lane (2016 – 2022)

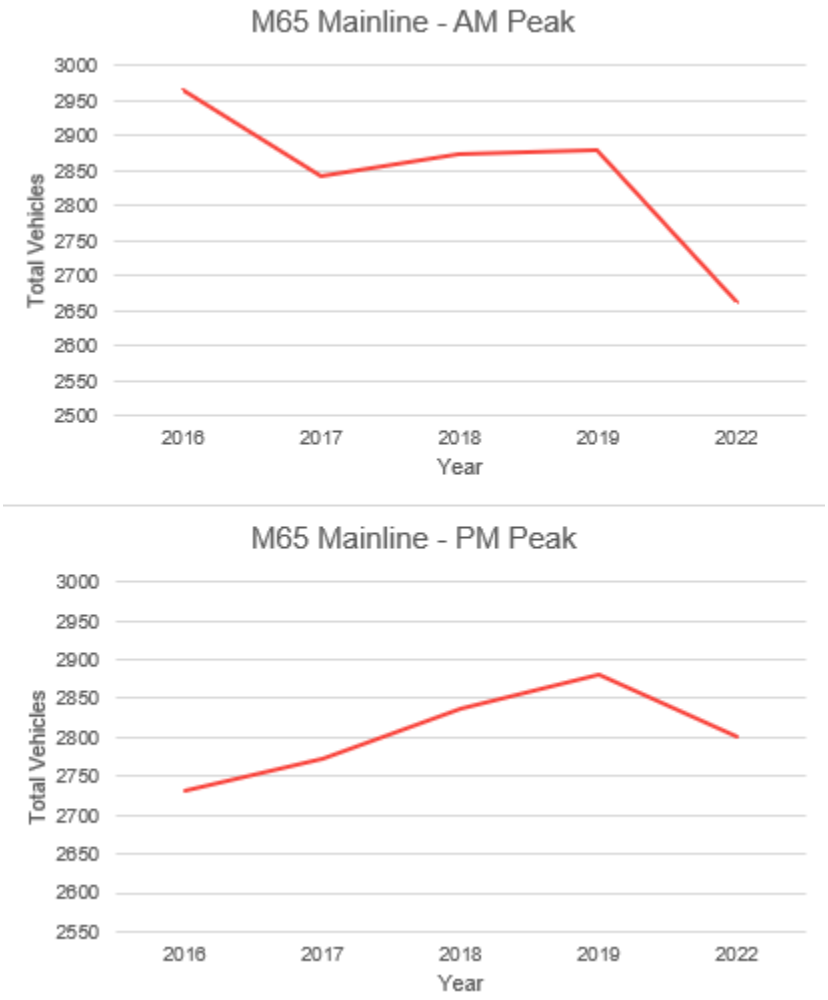


The data above shows that there has been a general downward trend in traffic flows during the peak hours along Stanifield Lane since the 2016 surveys were undertaken.

WebTRIS data for the M65 mainline at its junction with the M6 has also been obtained for the past 6 years to show peak hour traffic flows in this location on the highway network.

WebTRIS peak hour data from sites M65/4011B (westbound) and M65/4011A (eastbound) from 2016 to 2022 is summarised in Figure 2 below.

Figure 2 - Comparison of two-way traffic flows on M65 Mainline (2016 – 2022)



The M65 mainline peak traffic data shows that in the AM peak there has been a reported decrease in two-way traffic flows from 2,966 vehicles in 2016 to 2,661 vehicles per hour in the 2022. A decrease in total vehicle flows by approximately 10%.

In the PM peak, the data shows an increase in vehicle traffic from 2,732 vehicles in 2016 to 2,800 vehicles in 2022. An increase in total vehicle flows by approximately 2%.

Summary

In summary, the majority of the 2016 survey data is higher than the more recent traffic data and therefore applying a growth rate to the 2016 data will result in an overestimation of current traffic flows, which appear to have generally reduced in recent years over the network assessed.

To avoid over-estimation of traffic flows it is proposed that **no growth will be applied to the 2016 base flows** to obtain 2023 base year flows, as this would result in 2023 Base Year flows which are higher than the existing traffic flows on the network.

To obtain 2024 base year flows, it is proposed that a TEMPro growth rate will be applied to the '2023 Base Year' flows, to account for any background growth forecast between 2023 and 2024.

The peak 2023-2024 growth rates for South Ribble (All) are:

- AM peak period: 1.009
- PM peak period: 1.008

Previously, committed developments had an assumed level of build out up to 2024. It is assumed that this is now included within the background traffic flows and therefore no committed development flows are added to the 2024 base flows.

To obtain the 2037 base year flows:

- 2024 to 2037 growth rates will be applied to the 2024 base data (adjusted to avoid double counting of committed developments)
- Committed developments will be added to the background traffic flows taking into account the level of anticipated build out between 2024 to 2037, assuming all committed development sites are built out by 2037.