



Open Data  
Manchester

# Traffic and Air Quality report for Barlow Hall Primary School, Darley Avenue

June 2021

[Monthly Transport figures for Darley Avenue](#)

[Cars on Darley Avenue Headline information](#)

[Air Quality & Pollution](#)

[Air Quality Index Tables](#)

[Darley Avenue](#)

[Four Banks:](#)

[Air Quality Index scale](#)

[School Streets Closure data report](#)

[Glossary and other useful information](#)

# Monthly Transport figures for Darley Avenue

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## Monthly transport figures for Darley Avenue



Source: Open Data Manchester CIC • Created with Datawrapper

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## Cars on Darley Avenue Headline information<sup>1</sup>

The school streets road closure took place on 15 & 16 June. 16 June also saw the most bicycles recorded on Darley Avenue.

- The total number of cars recorded on Darley Avenue this month was **28,048**, which is **up 0.5%** from last month.
- The busiest day for cars was **Wednesday 30 June** with **1,135** cars recorded.
- The quietest day for cars was **Sunday 13 June** with **638** cars recorded.
- The busiest day for bicycles was **Wednesday 16 June** with **359** recorded.
- The average morning peak hour for traffic was **08:00-09:00**. The average afternoon peak hour was **16:00-17:00**.

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<sup>1</sup> **Source:** [Telraam.net](https://www.telraam.net) \*\*please note that all figures are indicative only and may vary up to 10%. Figures for pedestrians do not distinguish between individuals and groups - i.e a group of 3 people walking together will be counted as 1. For a more detailed breakdown visit [https://bit.ly/DarleyAveDashboard\\_June](https://bit.ly/DarleyAveDashboard_June) or [https://bit.ly/DarleyAveReport\\_June](https://bit.ly/DarleyAveReport_June).

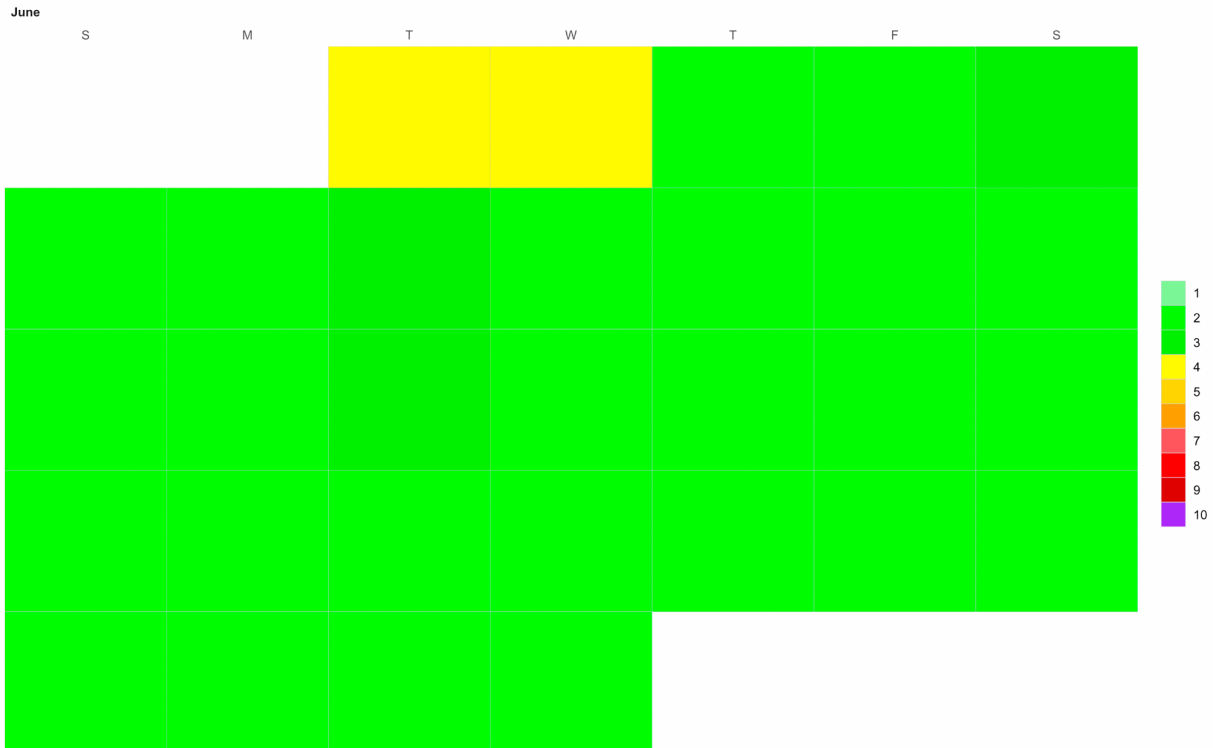
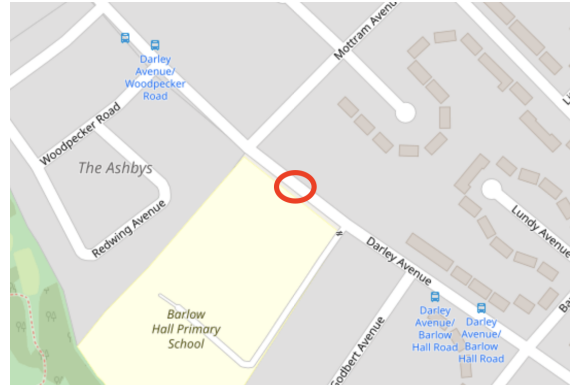
## Air Quality & Pollution

Pollution levels at throughout **June** remained **Low** at both **Darley Avenue** and at the **junction of Wilbraham Road and Barlow Moor Road**. However, Darley Avenue did register 2 days of Moderate air pollution on 1 & 2 June.

### Air Quality Index Tables<sup>2</sup>

#### Darley Avenue

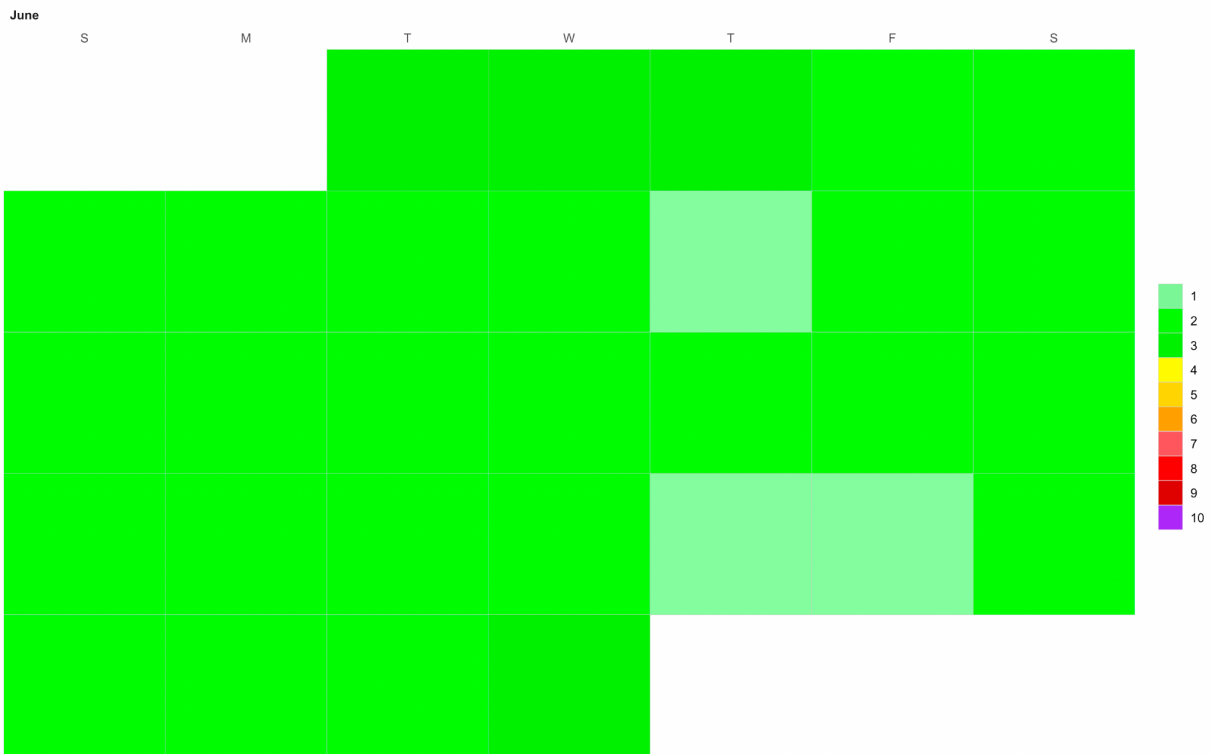
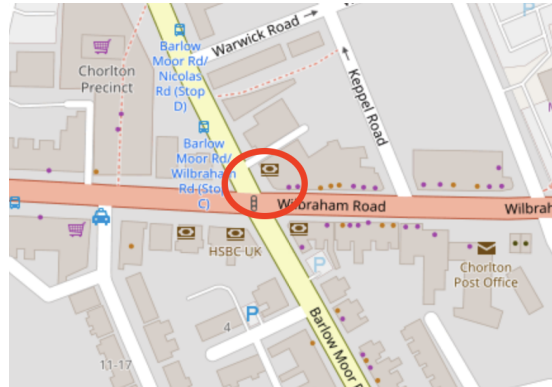
- 25 day registered Level 2 (Low)
- 3 days registered Level 3 (Low)
- 2 days registered Level 4 (Moderate).



<sup>2</sup> Source: The index is made up of readings taken from an EarthSense Zephyr air quality monitor installed on Darley Avenue. The index is worked out by measuring Nitrogen Monoxide (NO), Nitrogen Dioxide (NO<sub>2</sub>), Ozone (O<sub>3</sub>) and Particulate Matters (PM<sub>1</sub>, PM<sub>2.5</sub> & PM<sub>10</sub>). We then used [Defra's Daily Air Quality Index](#) to determine the result and scale. For more information, see the Glossary

Four Banks:

- 3 days registered Level 1 (Low)
- 23 days registered Level 2 (Low)
- 4 days registered Level 3 (Low).



### Air Quality Index scale<sup>3</sup>

1	<b>Low</b>	Enjoy your usual activities
2		
3		
4	<b>Moderate</b>	Adults and children with lung problems, and adults with heart problems, who experience symptoms, should consider reducing strenuous physical activity, particularly outdoors.
5		
6		
7	<b>High</b>	Adults and children with lung problems, and adults with heart problems, should <b>reduce</b> strenuous physical exertion, particularly outdoors, and particularly if they experience symptoms. People with asthma may find they need to use their reliever inhaler more often. Older people should also <b>reduce</b> physical exertion.
8		
9		
10	<b>Very high</b>	Adults and children with lung problems, adults with heart problems, and older people, should <b>avoid</b> strenuous physical activity. People with asthma may find they need to use their reliever inhaler more often.

<sup>3</sup> Source: <https://uk-air.defra.gov.uk/air-pollution/daqj>. For more information on how we calculated our own index, see the Glossary.

# School Streets Closure data report

On Tuesday 15 & Wednesday 16 June 2021, the street outside of Barlow Hall Primary School was closed to traffic from 8-9am and 3-4pm.

Using data from one of our Telraam traffic counters located on Darley Avenue, we took an average of the traffic counted on Tuesdays and Wednesdays throughout the month to create a June baseline.

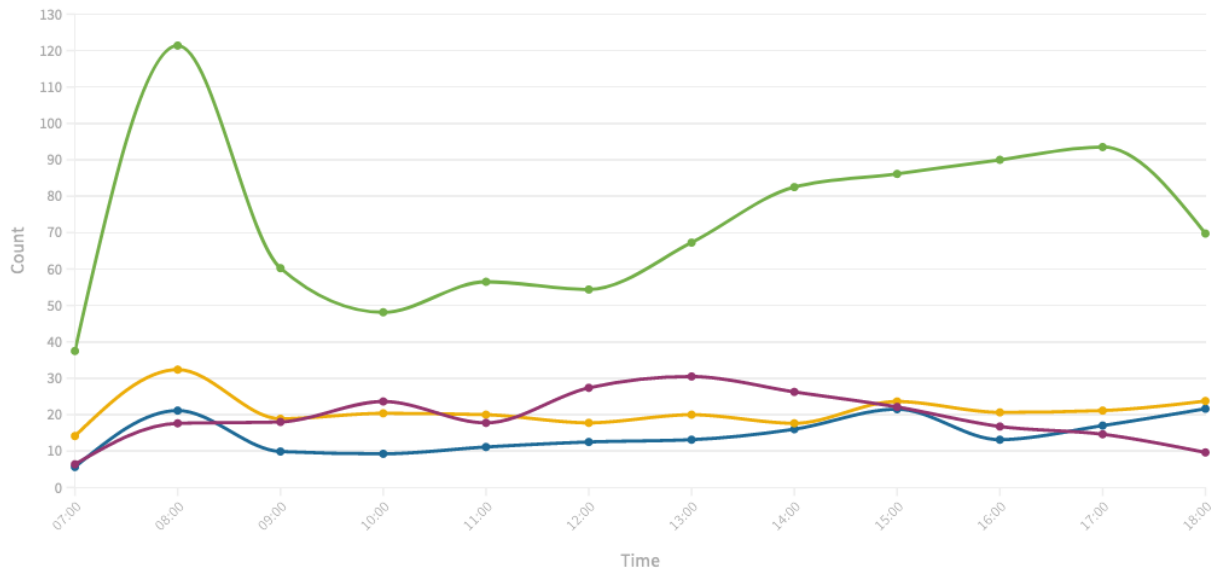
The visualisation below shows the expected rush hour peaks at 8-9am and 2-5pm, which is likely a combination of the school run and residents travelling to/from work.

## Darley Avenue Traffic Count

Graph showing amount of traffic per hour on Darley Avenue

June Average

■ Pedestrian Total 
 ■ Bike Total 
 ■ Car Total 
 ■ Large vehicle Total



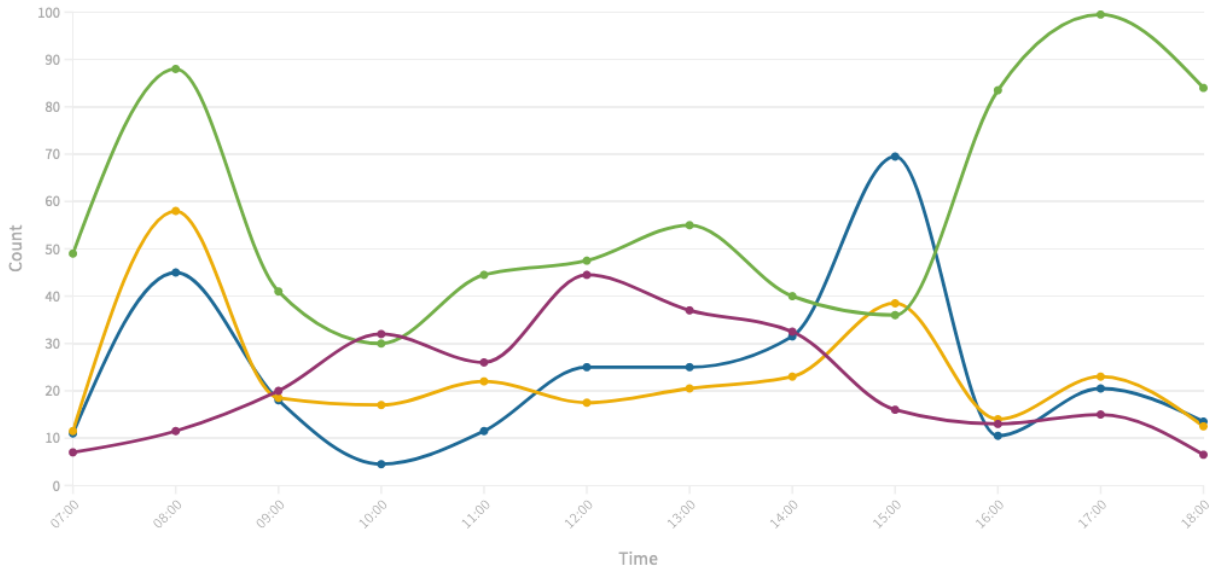
The average for the street closure days still shows a peak in cars at 8am, which is likely due to residents travelling to work, but we also see a noticeable increase in bicycles and pedestrians. The evening peak for cars doesn't happen until after the school closure in the evening at 5 pm and again we see an increase in bikes and pedestrians.

### Darley Avenue Traffic Count

Graph showing amount of traffic per hour on Darley Avenue

Road Closure Average ▾

■ Pedestrian Total 
 ■ Bike Total 
 ■ Car Total 
 ■ Large vehicle Total



We still see a relatively high number of cars during the road closure hours. This is likely due to the location of the traffic counter picking up residents from both Darley Avenue and Godbert Avenue, which is a cul-de-sac located in the middle of the street closure area.

## Glossary and other useful information

**AQI - Air quality index.** This tells you levels of air pollution and can provide recommendations about actions and health advice. There are various indexes available but in the UK the most commonly used is the Defra Daily Air Quality Index.

The index is based on concentrations of various pollutants, which are broken down into various levels, as shown in the table below. Different averaging periods are given depending on the pollutant. The overall index given is whichever is highest level.<sup>4</sup>

We have used the following table, based on Defra’s Daily Air Quality Index, to calculate our own air quality index.

Index	Ozone, 8 hour mean (µm/m3)	Nitrogen Dioxide, hourly mean (µm/m3)	PM2.5 particles, 24 hour mean (µm/m3)	PM10 particles, 24 hour mean (µm/m3)
1	0-33	0-67	0-11	0-16
2	34-66	68-134	12-23	17-33
3	67-100	135-200	24-35	34-50
4	101-120	201-267	36-41	51-58
5	121-140	268-334	42-47	59-66
6	141-160	335-400	48-53	67-75
7	161-187	401-467	54-58	76-83
8	188-213	468-534	59-64	84-91
9	214-240	535-600	65-70	92-100
10	≥ 240	≥ 601	≥ 71	≥ 101

**µm/m3 - micrograms per cubic metre** - air pollution is given as a concentration in micrograms (one millionth of a gram or “µm”) per metre cubed (m3).

**NO - Nitrogen Monoxide or Nitric Oxide.** A colourless gas, Is not considered hazardous to health at typical ambient temperatures.

<sup>4</sup> Source: <https://uk-air.defra.gov.uk/air-pollution/daqj>. Defra also monitor Sulphur Dioxide, but our monitors do not measure this.



**NO<sub>2</sub> - Nitrogen Dioxide** - a reddish, brown gas, considered a primary air pollutant. In sunny, dry conditions, NO<sub>2</sub> can break down and release an oxygen ion and cause an increase in ozone (O<sub>3</sub>).

NO and NO<sub>2</sub> are created when nitrogen and oxygen react at high temperature - such as in a car's combustion engine or the heat caused during a lightning strike.

**O<sub>3</sub> - Ozone** - considered a secondary pollutant. At ground level, ozone can contribute to respiratory problems.<sup>5</sup>

O<sub>3</sub> is created when NO<sub>2</sub> breaks down. Sunlight can cause this reaction. We tend to see an inverse correlation between the two pollutants - O<sub>3</sub> readings increasing whilst NO<sub>2</sub> tends to drop during daylight hours, and O<sub>3</sub> dropping whilst NO<sub>2</sub> increases overnight.

**Particulate Matter (PM)**<sup>6</sup> - describes the mixture of liquid and solids found in the air, such as dust or ash. PM measurements are given based on the diameter or width of the particle.

**PM<sub>1</sub>** - means the mass per cubic metre of air with particles of a diameter less than 1 micrometres (µm)

**PM<sub>2.5</sub>** - means the mass per cubic metre of air with particles of a diameter less than 2.5 micrometres (µm)

**PM<sub>10</sub>** - means the mass per cubic metre of air with particles of a diameter less than 10. micrometres (µm)

**Defra** - is the UK Government's Department for Environment, Food and Rural Affairs who oversee environmental policy within the UK

For more information about air pollution, you might find this [beginner's guide](#) useful. Defra also have lots of information about air pollution and their own [Daily Air Quality Index](#).

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<sup>5</sup> Source: <https://www.aeroqual.com/ozone-pollution-problem>

<sup>6</sup> <https://laqm.defra.gov.uk/public-health/pm25.html>