# St Mary's School Street

Creating safer spaces for walking and cycling to school.


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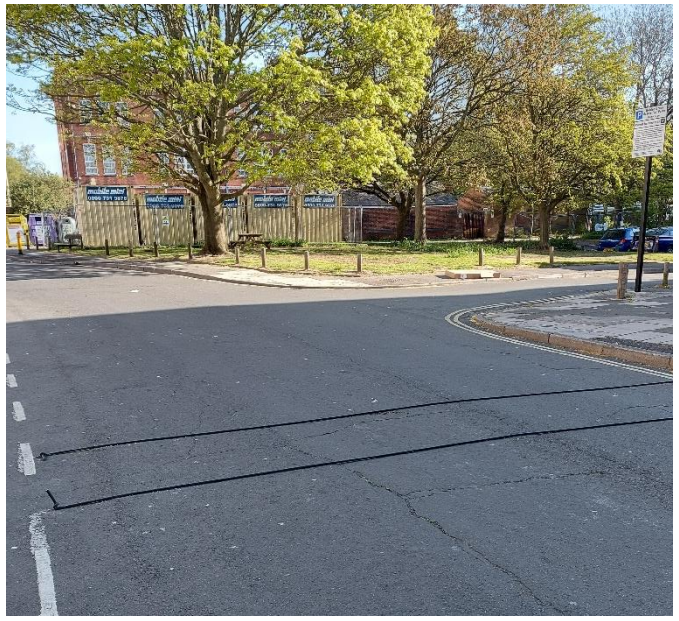
# Monitoring

To asses the impact of the timed road closure during the consultation period, we used a variety of monitoring measures;

- Zephyr Air Quality Monitor, Dec 2019 to July 2021
- Traffic Speed and Volume (TSV) Counters
- Big Pedal School Street Surveys 2019
- Pre and Post installation Surveys, based on Healthy Streets guidance and previously used at St Johns, Southampton
- Hands Up Surveys/Travel Tracker data
- Parent Focus Group. This was not possible due to the pandemic.

The surveys were carried out by Sustrans and council officers, with the pre and post installation surveys also happening online. These surveys were shared with parents using the schools email system to help collate more data. The TSV counters were sub-contracted to an external provider. Sustrans Research and Monitoring Unit (RMU) analysed all the data that was collected and collated an initial report of findings.

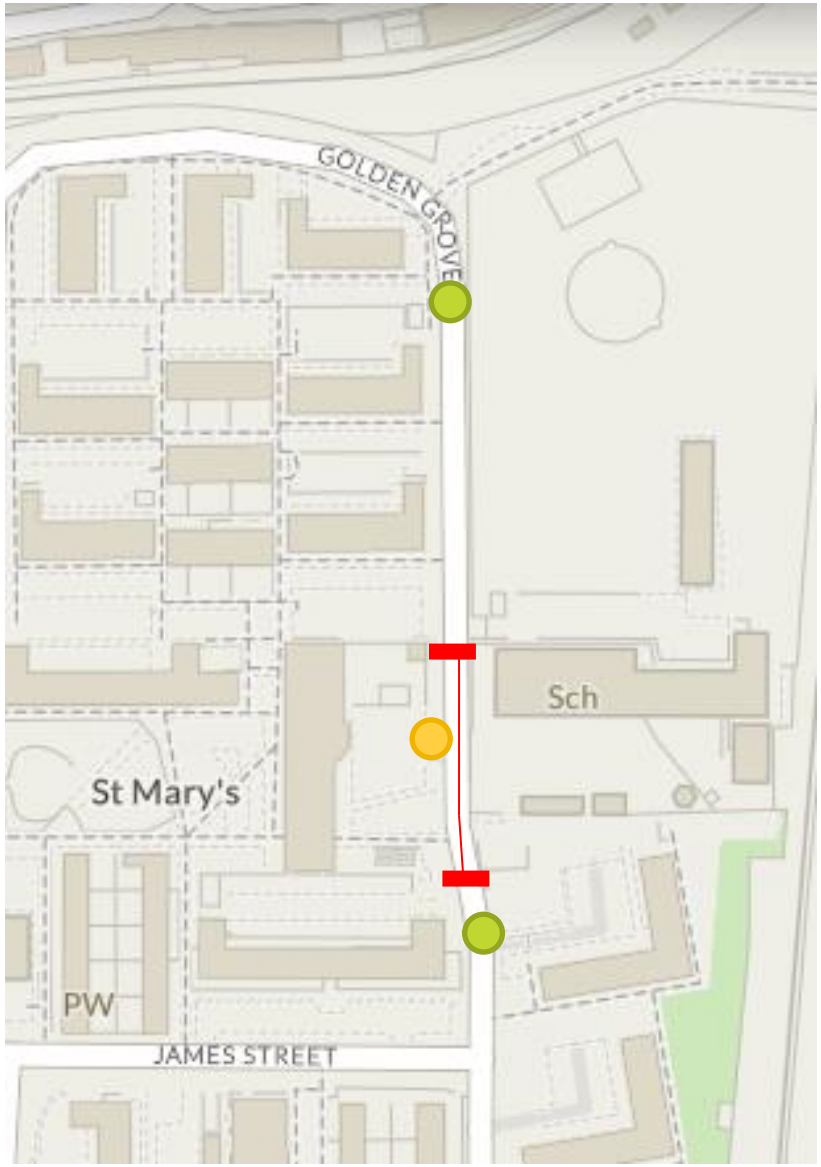
The baseline data used in our monitoring has been taken before the installation completion date of the timed road closure on 24th February 2020. The dates of the monitoring vary per measure and have been shown alongside the results for each measure.



Right top: Zephyr air quality monitor attached to a lamp post directly outside of the school

Right bottom: Traffic Speed and Volume (TSV) counters in place at the southern end of Golden Grove near James Road.

# Monitoring Map




Left: The map left shows the location of monitoring devices used on Golden Grove. Map OS Maps.

Top right: Traffic counters at the north end of Golden Grove
Bottom left : Traffic counters at the south of Golden Grove.

| Key for Map | |
|---|---|
| | School street closure location |
| | Air Quality Monitor location |
| | Traffic speed and volume counters |

# Data collection and methodology

| Monitoring Objectives | Project Outcomes | Monitoring Tools |
|---|---|---|
| Impact of School Streets on:<br>—Journey to school – modal shift<br>—Traffic outside school<br>—Traffic congestion/dispersion<br>—Perception of safety<br>—Perception of congestion<br>—Perception of more space for socialising and building community cohesion<br>—Perception of more space for play<br>—Perception of the long term impact of the scheme<br>—Air Quality<br>Efficacy:<br>—Parent and resident response to the scheme | 1. Increase active travel and physical activity<br>2. Fewer motorised vehicle trips<br>3. Improved air quality<br>4. Reduced congestion<br>5. Increased physical and social safety<br><br>**Monitoring Outcomes**<br>6. Understand the long term impact of the intervention<br>7. Public and school's perception of the impact of the street closure.<br>8. Deeper understanding of public perception | —**Model shift data**<br>Taken from Living Streets Travel Tracker school survey<br>—**Air quality monitoring**<br>Zephyr monitor at site for 18months before and after the infrastructure changes.<br>—**Parent and Resident survey**<br>Taken during the first closures and after the infrastructure changes.<br>—**Traffic counts**<br>Traffic speed and volume counters to measure before and after infrastructure changes. |

Each outcome is numbered and will be referred back to within the analysis of information.

# School Travel and Covid-19

With the implementation of the school street in February 2020, the project has been impacted by the Covid-19 pandemic and resulting regulations around physical (social) distancing and the closure of schools as well as other community groups and meeting places.

**Key ways in which Covid-19 has impacted the project and its monitoring:**

- Lockdown periods meant schools were operating at a reduced staff and pupil capacity with key worker children and essential school staff, therefore the school did not use the retractable bollards during these periods. The timed road closure was in place:
  - 24th February 2020 to 20th March 2020. Stopped due to lockdown.
  - 4th September to 9th October 2020. Stopped due to reduced staff and half term.
  - 2nd November 2020 to 4th January 2021. Stopped due to lockdown
  - March 8th 2021 to present day.

- Schools using staggered start and finish times for year groups.

- The school created a one-way system for parents/carers to arrive and leave the school site during the school runs, all within the space of the school street.

- Many people are not making their usual journeys for work/ leisure at present and reduced vehicles using local roads, including A3024 and St Mary Street.

- Travel restrictions and social distancing meant no face-to-face focus groups or data collection could take place.

- Changes to parents working circumstances due to Covid have altered some families' travel behaviours.

- Cruise liners and similar vessels were not operating during the pandemic, and many were kept at the port of Southampton idling their engines, affecting the air quality across the locality.

The comparative data was taken during a period when school staff and pupils has returned to school site and the timed road closure was in use.

Questions asked on our parent/carer survey are essentially the same, and due to Covid-19 social distancing rules, the post survey was carried out completely online, rather than in-person outside of the school. This meant that the questions were re-tooled slightly to ensure that respondents were answering the questions with locations attached i.e. "the street outside St Mary's School".

# Resident and parents surveys - Safety

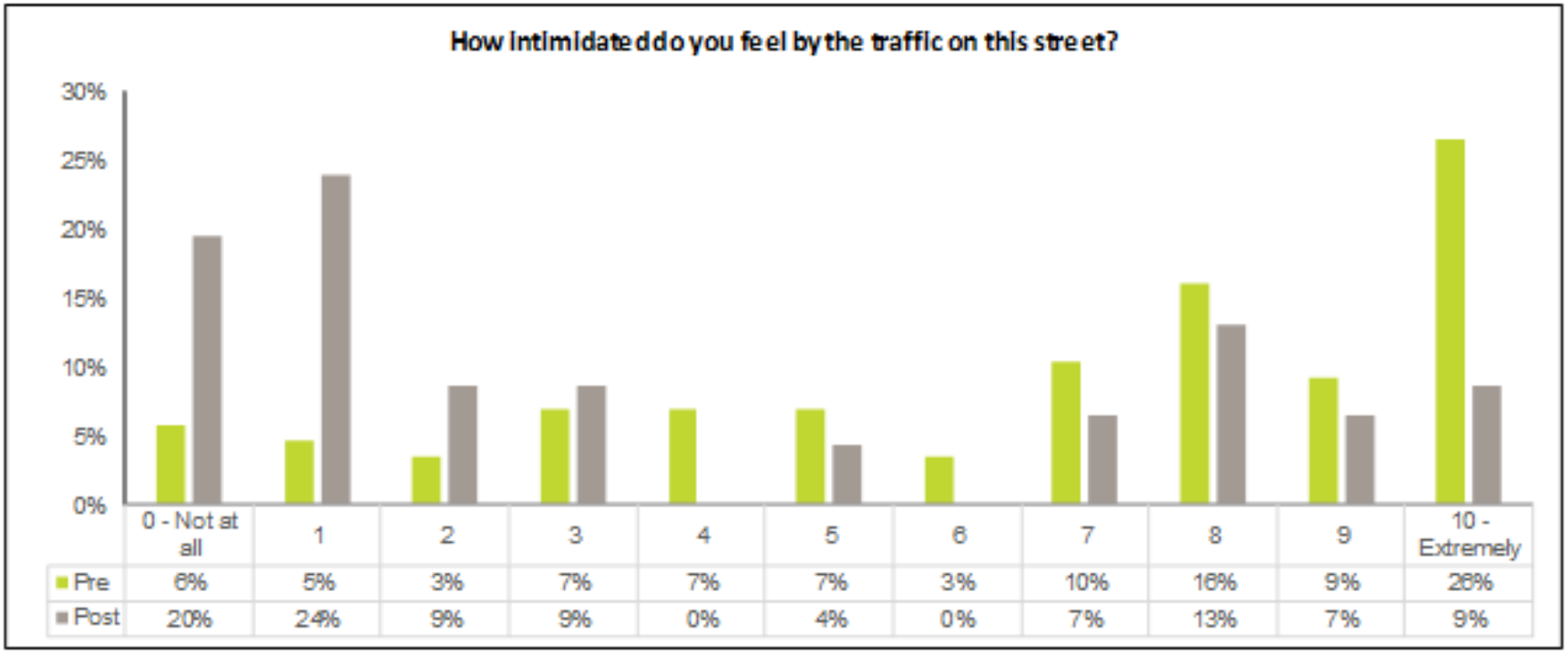
| | |
|---|---|
| **Pre surveys** | **29th Jan – 23rd Feb 2020**<br>**In person outside of St Mary's and online survey** |
| **Post surveys** | **25th April – 18th June 2021**<br>**Online survey only** |

**How intimidated do you feel by the traffic on this street?**

Many families voiced concerns about the safety on Golden Grove due to a previous incident involving a pupil. The surveys of residents and parents showed they felt much less intimidated by the traffic on the street. 21% of respondents responded "*Not at all*" (0, 1, 2 or 3) at baseline compared to 61% at follow-up.

**Outcome evidences:**

**5.** Increased physical and social safety
**7.** Public and school's perception of the impact of the street closure.
**8.** Deeper understanding of public perception




| | 0 - Not at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 - Extremely |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Pre | 6% | 5% | 3% | 7% | 7% | 7% | 3% | 10% | 16% | 9% | 26% |
| Post | 20% | 24% | 9% | 9% | 0% | 4% | 0% | 7% | 13% | 7% | 9% |

# Resident and parents surveys - Safety

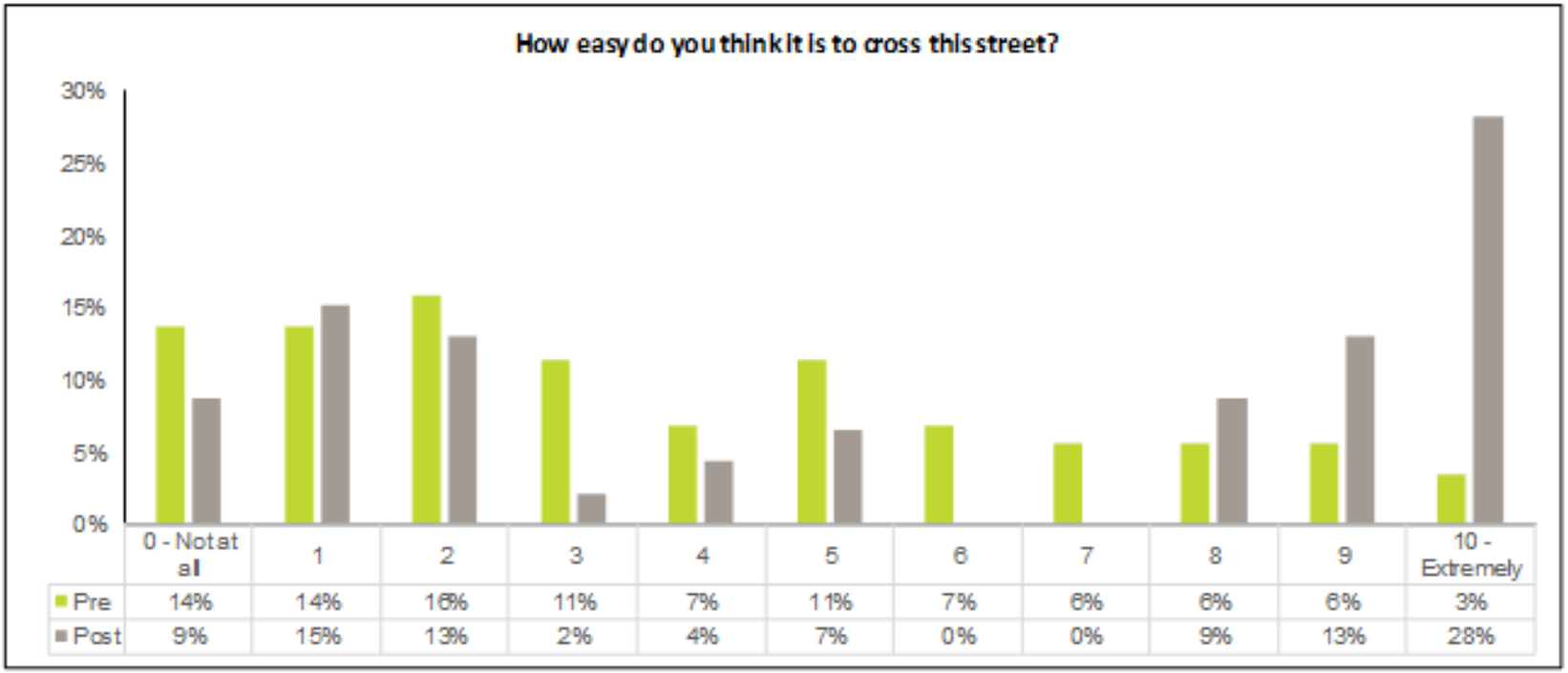
| | |
|---|---|
| **Pre surveys** | **29th Jan – 23rd Feb 2020**<br>**In person outside of St Mary's and online survey** |
| **Post surveys** | **25th April – 18th June 2021**<br>**Online survey only** |

**How easy do you think it is to cross this street?**

The data from the surveys shows that we had more responses in our follow up survey answering *"Extremely" (*7,8,9 or 10) from 21% to 50%. This change from "not at all" shifting towards "Extremely" indicated that parents/carers felt it was much easier to cross the road since the timed road closure was in place.

**Outcome evidences:**

**2.** Fewer motorised vehicle trips
**4.** Reduced congestion
**5.** Increased physical and social safety
**7.** Public and school's perception of the impact of the street closure.
**8.** Deeper understanding of public perception




| | 0 - Not at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 - Extremely |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Pre | 14% | 14% | 16% | 11% | 7% | 11% | 7% | 6% | 6% | 6% | 3% |
| Post | 9% | 15% | 13% | 2% | 4% | 7% | 0% | 0% | 9% | 13% | 28% |

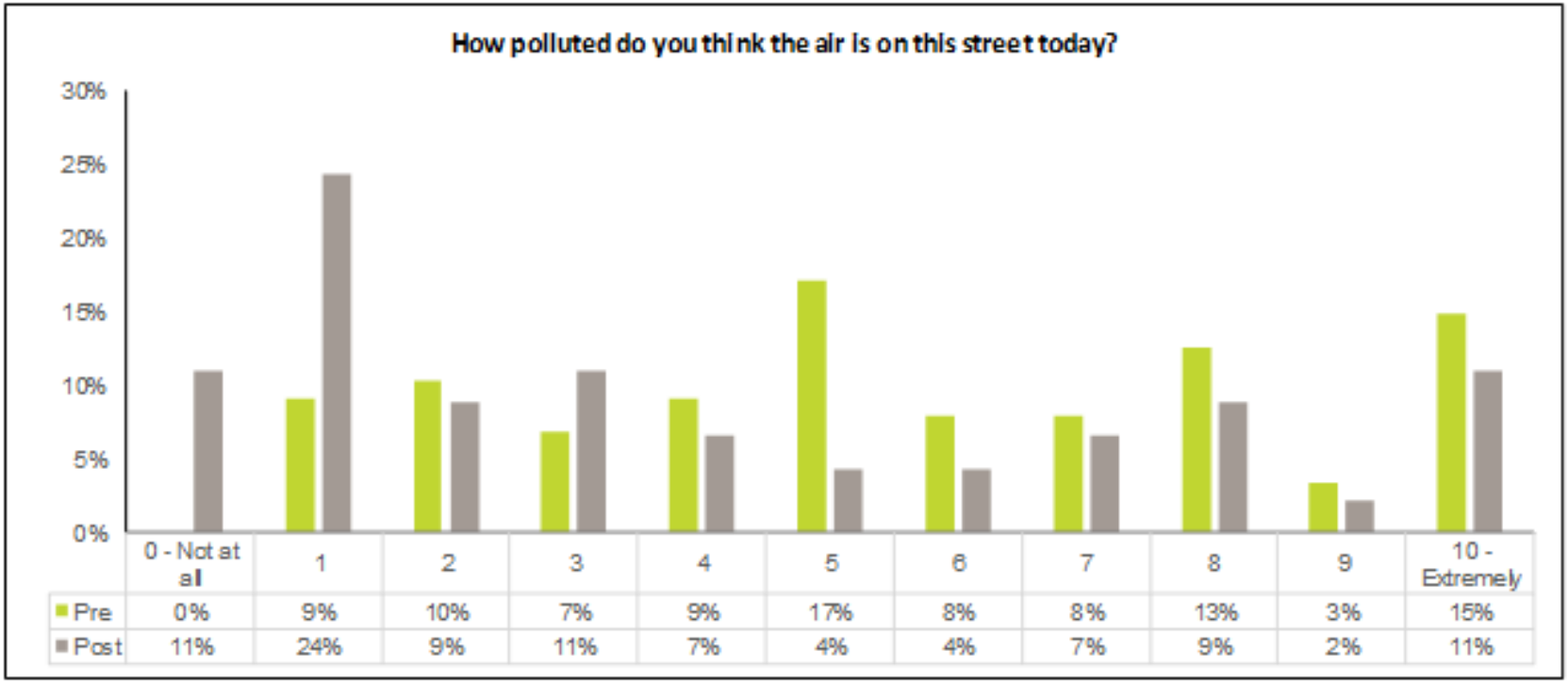
# Resident and parents surveys – Air Quality

**How polluted do you think the air on the street is today?**

There was a large increase in respondents ranking *"Not at all",* from 26% at baseline to 56% at follow-up when the timed road closure was in place.
Additionally, respondents rating *"Extremely"* end of the scale (7-10) decreased from baseline (39%) to follow-up (29%). This indicates parents/carers thought that the air is less polluted after the intervention was in place outside of the school.

> **It is safer for the children and there are less fumes for everyone to inhale, especially staff who are on duty every day.**
> Staff Member, St Mary's Primary

**Outcome evidences:**
**3.** Improved air quality
**6.** Understand the long term impact of the intervention,
**7.** Public and school's perception of the impact of the street closure.




| | 0 - Not at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 - Extremely |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Pre | 0% | 9% | 10% | 7% | 9% | 17% | 8% | 8% | 13% | 3% | 15% |
| Post | 11% | 24% | 9% | 11% | 7% | 4% | 4% | 7% | 9% | 2% | 11% |

# Air Quality

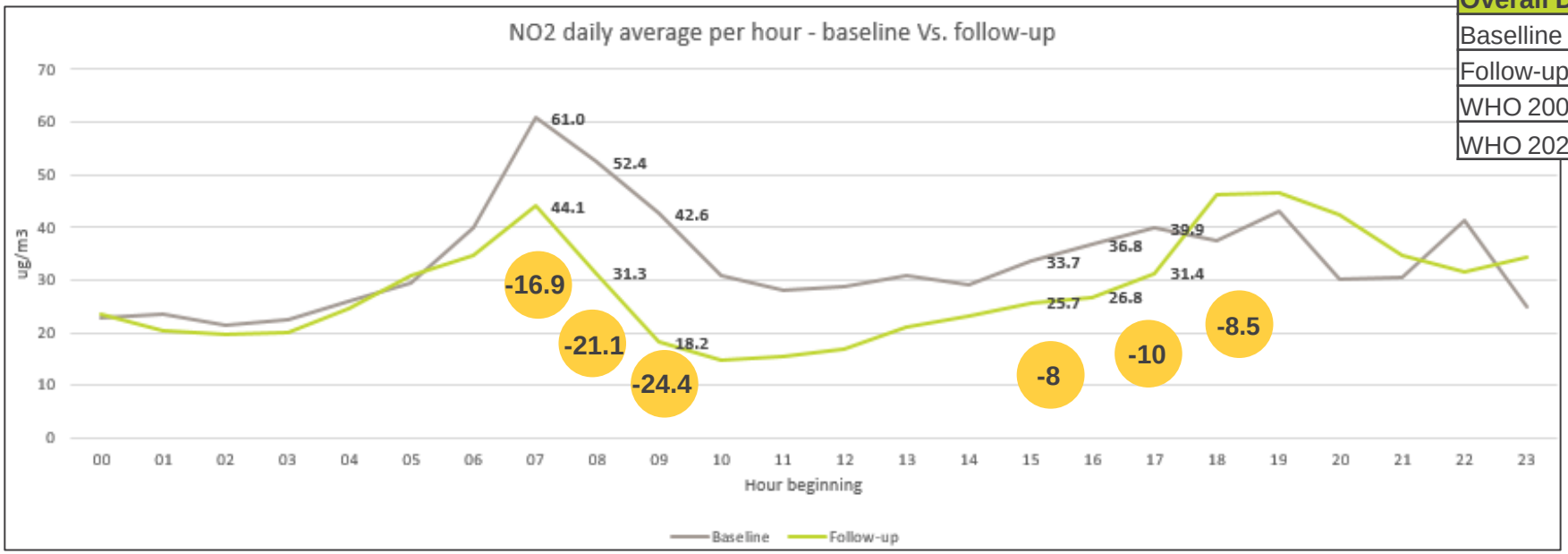
| | |
|---|---|
| **Baseline data** | **00:00 Monday 10th Feb 2020 – 23.59 Friday 14th February 2020** |
| **Follow up data** | **00:00 Monday 18th March 2021 – 23.59 Friday 22nd March 2021** |

The Zephyr monitor was in place for 18 months from December 2019 until July 2021. The monitor collected data for a number of particulates including: PM2.5, PM10, PM1, NO, $O_3$ and $NO_2$. The data shown from the air quality monitor focuses on the results of the $NO_2$, Nitrogen Dioxide, as external factors such as weather and temperature made it impossible to draw conclusions for other particulates.

The monitor shows that during the follow up period, there air quality was reduced throughout most of the day, with the daily average reduced by 5µg/m$^3$ (micrograms per cubic metre).

The hours associated with the school run saw significant decreases of $NO_2$, suggesting that the air was cleaner outside of the school with the timed road closure in place. The drop in NO2 was noticeably more significant in the morning than the afternoon school run with a decrease of 24.4 5µg/m$^3$ at 9am compared to a decrease of up to 10 5µg/m$^3$ at 4pm.

**Outcome evidences: 3.** Improved air quality, **6.** Understand the long term impact of the intervention




| Overall Daily Average | µg/m3 |
|---|---|
| Baselline | 33.6 |
| Follow-up | 28.3 |
| WHO 2005 limit | 40 |
| WHO 2021 limit | 10 |

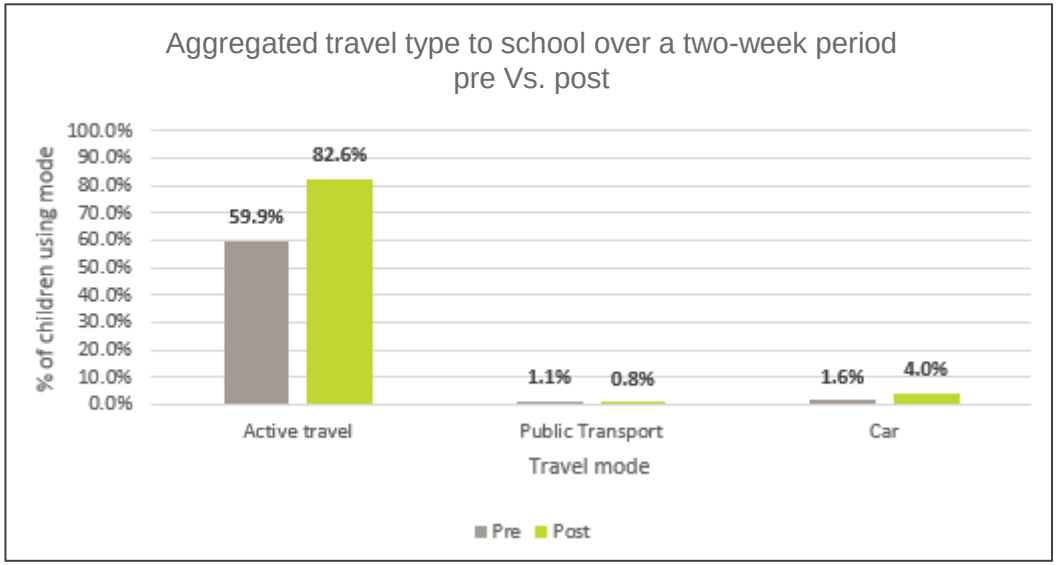
St Mary's School Street

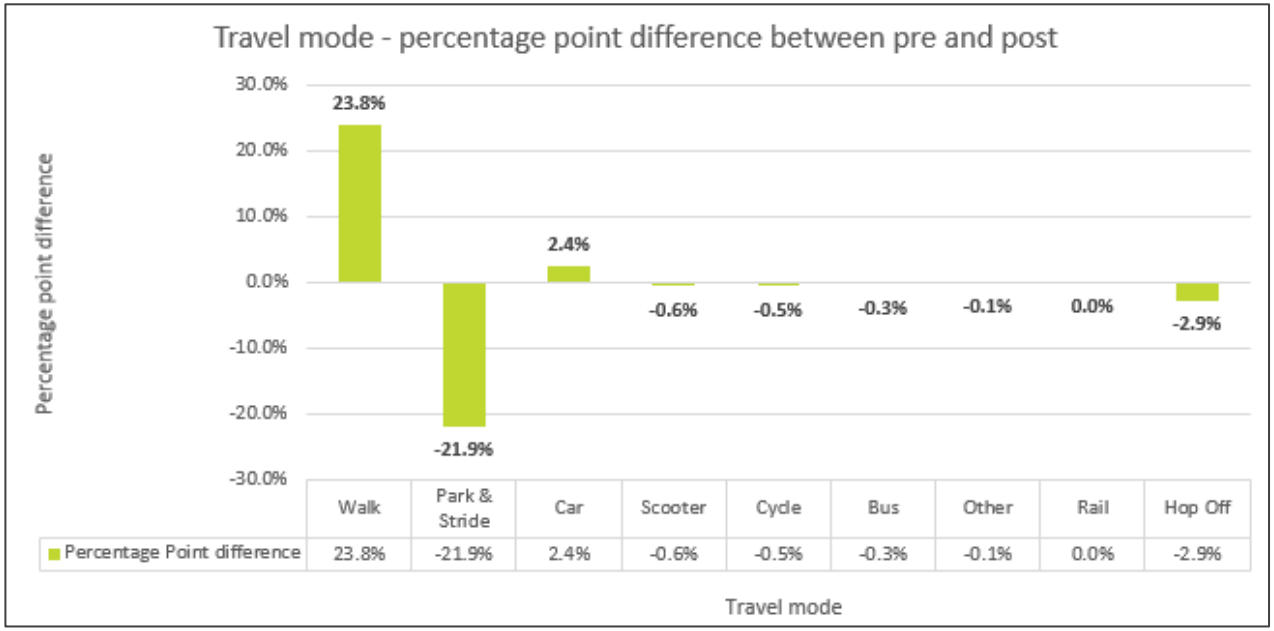
# Modal Shift

| | |
|---|---|
| **Baseline Hands Up Survey data** | **Monday 24th Feb – Friday 6th March 2020** |
| **Follow-up Hands Up Survey data** | **Monday 7th June – Friday 18th June 2021** |

The data shows that there was an overall increase in active travel, showing a 23.8 percentage point increase in children walking to school.

Public transport showed a slight reduction of 0.3%, as well as the reduction of hybrid walk and bus journeys referred to as "Hop Off" journeys. This reduction could be attributed towards peoples reluctance of travelling on public transport during the pandemic. This could explain the rise in private car journeys from 1.6% up to 4%.




The data shows a large decrease in those being driven close to school and walking the last 5 minutes, referred to as "Park & Stride". The definition of "Park &Stride" can be misunderstood by pupils when there is no designated site for families to use. At St Mary's, the Sustrans schools officer and school champion have tried to set up a site locally but have not had success to date.

Whilst the data above shows that active travel has seen an increase, the data is inconclusive. The impact of Covid on this project has seen a change in attitude towards using public transit, as has been seen across the UK.

**Outcome evidences:**

**1.** Increase active travel and physical activity
**2.** Fewer motorised vehicle trips
**6.** Understand the long term impact of the intervention

St Mary's School Street

# Traffic Speed and Volume

The counters observed a 15.5% reduction in the daily average vehicular traffic volume during weekdays at both the north and south locations. The north counter observed a slight increase at the weekend possibly showing the impact intervention mainly affecting weekday traffic.

The hourly average volume for the weekdays at the north shows a similar but decreased pattern in follow up, with peaks at school drop-off and pick up times. The South shows a more prominent decreased pattern from pre to post monitoring periods. This could suggest that families are changing their behaviour to a 'park and stride' or other active travel mode.

Both counters observed a decrease in the average speed during the weekdays as well as a decrease in vehicles travelling over the speed limit (20mph). Whilst the decrease may seem small, it helps to contribute to a safer road in a highly residential area.

**Outcome evidences:** **2.** Fewer motorised vehicle trips,
**4.** Reduced congestion,
**6.** Understand the long term impact of the intervention

| | |
|---|---|
| **Baseline data** | **Saturday 8th February – Friday 14th February 2020** |
| **Follow-up data** | **Saturday 24th April – Friday 30th April 2021** |

## North

**Average vehicle speed(mph)**

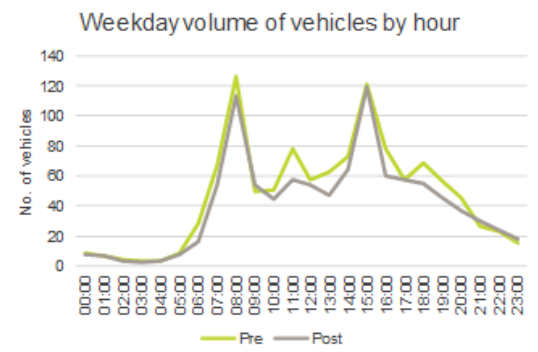
| | PRE | POST |
|---|---|---|
| **Weekday** | 17.8 | 17.4 (-2.2%) |
| **Weekend** | 18.4 | 18.2 (-1%) |

**Speed Limit Analysis**

**25.5%** of vehicles were travelling over the speed limit at PRE

**24.5%** of vehicles were travelling over the speed limit POST

**Volume of vehicles by hour**




## South

**Average vehicle speed(mph)**

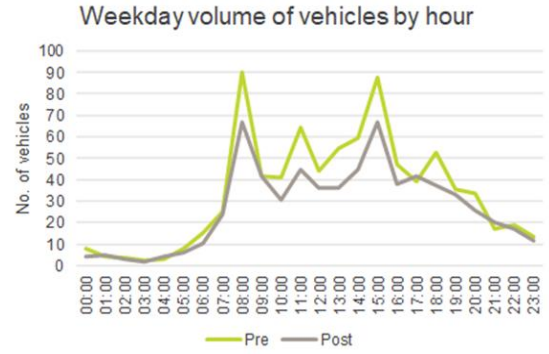
| | PRE | POST |
|---|---|---|
| **Weekday** | 14.0 | 13.4 (-4.3%) |
| **Weekend** | 15.1 | 14.7 (-2.6%) |

**Speed Limit Analysis**

**6.6%** of vehicles were travelling over the speed limit at PRE

**5.6%** of vehicles were travelling over the speed limit POST

**Volume of vehicles by hour**



# Lessons Learned

The project on Golden Grove provided a chance for the Sustrans officer, the council team, and wider Sustrans colleagues to learn more about running school street project. Lessons learned include:

- Pilot one day events in advance help to demonstrate impact, but are also massively valuable for messaging
- This scheme demonstrates that permanent measures such as this can be managed effectively by school staff on a long term basis
- Street layout required for these measures mean that they are only suitable in a minority of locations
- The project was only possible in the timescales because of the Experimental Traffic Regulation Order (ETRO) process
- Key to the project's success was the vital combination of ambition in the council, school, Sustrans and partners to make it happen. Prioritisation of this project was required by each at one time or another.
- Greater number of TSV counts would be useful to draw more conclusions about travel behaviour and impact on the surrounding roads.
- The previous engagement of the school in active travel initiatives such as Bike It meant that key relationships were well established and the comms with the wider school community had context.
- Whilst the measures have been very successful in creating a safer space that is easier to travel actively through, this has not addressed the useability of the space. More work could have been done during the project to address issues such as seating / attractiveness on Golden Grove. Another council department have coincidently installed a bench and plants opposite the school along the closure area in January 2022.

Above: Bench installed by Southampton City Council in January 2022

**"The schools enthusiasm and involvement made it easier to plan and engage the school community at each step of the journey. The school street has been transformative, creating a much calmer space on Golden Grove during the school run."**

**Sustrans Schools Officer**

# Conclusion

St Mary's CE Primary school participated in an one-off school street event which has led to major infrastructure changes supporting a safer school run for families and staff. The project has been unavoidably affected by the pandemic, but we can be confident that the positive outcome would have been similar in a pre-covid context.

The engagement and support from the school throughout the project has helped to develop successful trial days, and supported the successful implementation of permanent changes. The communication channels through the school helped to share key messages and details at each stage of the project, including collecting survey responses from parents. The success and ease of the project lies with the excellent partnership working between Sustrans, Southampton City Council, Balfour Beatty and the school, and the communication and relationships built between key stakeholders.

During public consolation periods, no objections about the scheme were raised. One query was raised about the scheme which came from the local police. They supported the project, and were not raising an objection against the scheme.

Whilst the modal shift data was inconclusive, the change in perception of safety and ease of travel is a clear indication the timed road closure has had a positive effect.

The lessons learned on this project have transferred to future schemes in Southampton, such as the importance of school buy in for school streets to be successful, officer engagement at the school with future schemes such as those launched in 2020/21 academic year. The Sustrans officer has taken the learning from this project to inform and inspire other projects across the UK.

The legacy work at St Mary's was successful and a fantastic example of retractable bollards being implemented as a timed road closure outside of a school. Every school street site has challenges, and repeating this particular infrastructure would not suitable for all school locations. For Golden Grove, this has worked perfectly and will continue to support safer journeys to school for many years to come.

**"A sentence or two from SCC colleague about how the scheme went for them and potential learnings or ambitions this project help fuel."**

**Someone from Southampton Council**

Top: One day closure July 2019
Bottom: Sustrans School Officer helping during the first week of the timed road closure.
Bottom photo credit Southampton City Council

# Conclusion

Celebration of school street permanency Nov 2021


School run at St Mary's November 2021

**"I am so proud of what the school council have achieved to help keep all our children are safe coming to school. The road closure has made such a difference not only to the safety of our students but it has also helped the children start the day much calmer. We know longer have to worry about children walking home or crossing the road outside of school. Every school should have one!"**

Deputy Headteacher, St Mary's CE Primary

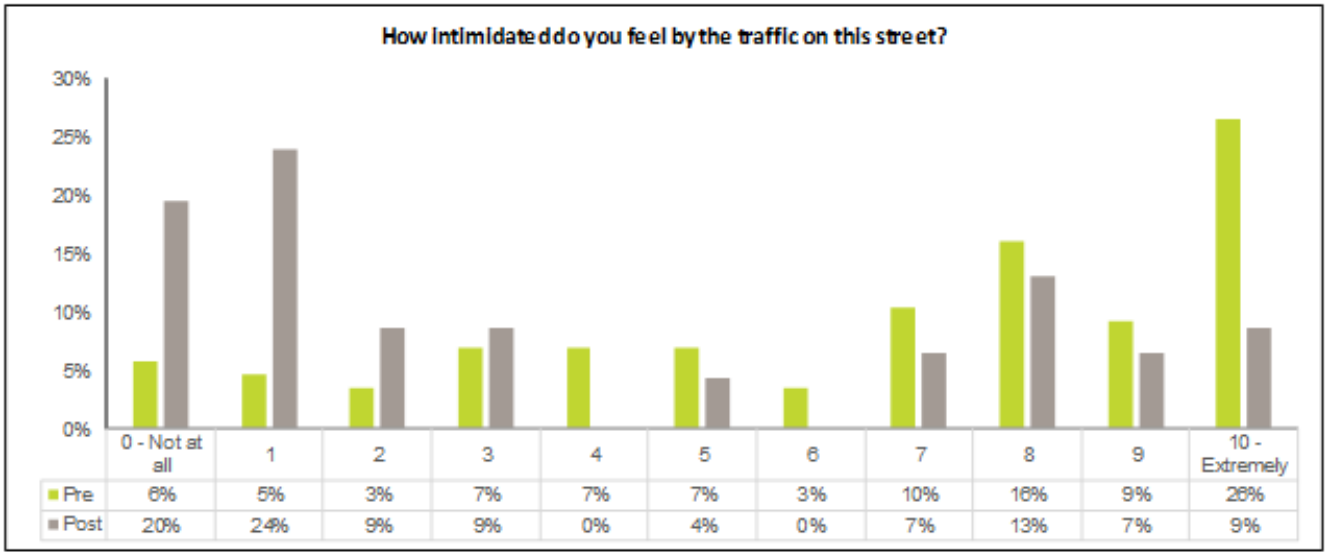
# Appendix; Resident and parents surveys - Safety

| | |
|---|---|
| **Pre surveys** | **29th January – 23rd February 2020**<br>**In person outside of St Mary's and online survey** |
| **Post surveys** | **25th April – 18th June 2021**<br>**Online survey only** |

| **Total Responses** | |
|---|---|
| **Pre** | 88 |
| **Post** | 46 |

**How intimidated do you feel by the traffic on this street?**

| Response | Pre | | Post | | % Point Change |
|---|---|---|---|---|---|
| | Freq | % | Freq | % | |
| **0- Not at all** | 5 | 6% | 9 | 20% | 14% |
| **1** | 4 | 5% | 11 | 24% | 19% |
| **2** | 3 | 3% | 4 | 9% | 5% |
| **3** | 6 | 7% | 4 | 9% | 2% |
| **4** | 6 | 7% | 0 | 0% | -7% |
| **5** | 6 | 7% | 2 | 4% | -3% |
| **6** | 3 | 3% | 0 | 0% | -3% |
| **7** | 9 | 10% | 3 | 7% | -4% |
| **8** | 14 | 16% | 6 | 13% | -3% |
| **9** | 8 | 9% | 3 | 7% | -3% |
| **10 – Extremely** | 23 | 26% | 4 | 9% | -18% |
| **Total** | 87 | 100% | 46 | 100% | |



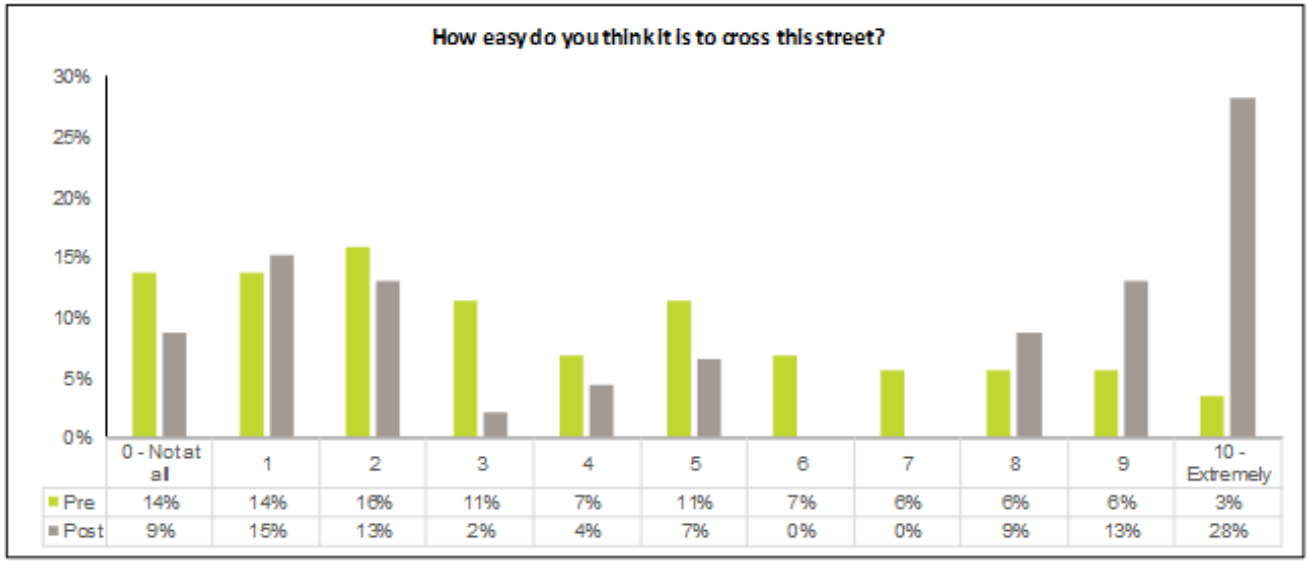
# Appendix; Resident and parents surveys - Safety

| | |
|---|---|
| **Pre surveys** | **29th January – 23rd February 2020**<br>**In person outside of St Mary's and online survey** |
| **Post surveys** | **25th April – 18th June 2021**<br>**Online survey only** |

| **Total Responses** | |
|---|---|
| **Pre** | 88 |
| **Post** | 46 |

**How easy do you think it is to cross this street?**

| Response | Pre | | Post | | % Point Change |
|---|---|---|---|---|---|
| | Freq | % | Freq | % | |
| **0- Not at all** | 12 | 14% | 4 | 9% | -5% |
| **1** | 12 | 14% | 7 | 15% | 2% |
| **2** | 14 | 16% | 6 | 13% | -3% |
| **3** | 10 | 11% | 1 | 2% | -9% |
| **4** | 6 | 7% | 2 | 4% | -2% |
| **5** | 10 | 11% | 3 | 7% | -5% |
| **6** | 6 | 7% | 0 | 0% | -7% |
| **7** | 5 | 6% | 0 | 0% | -6% |
| **8** | 5 | 6% | 4 | 9% | 3% |
| **9** | 5 | 6% | 6 | 13% | 7% |
| **10 – Extremely** | 3 | 3% | 13 | 28% | 25% |
| **Total** | 88 | 100% | 46 | 100% | |



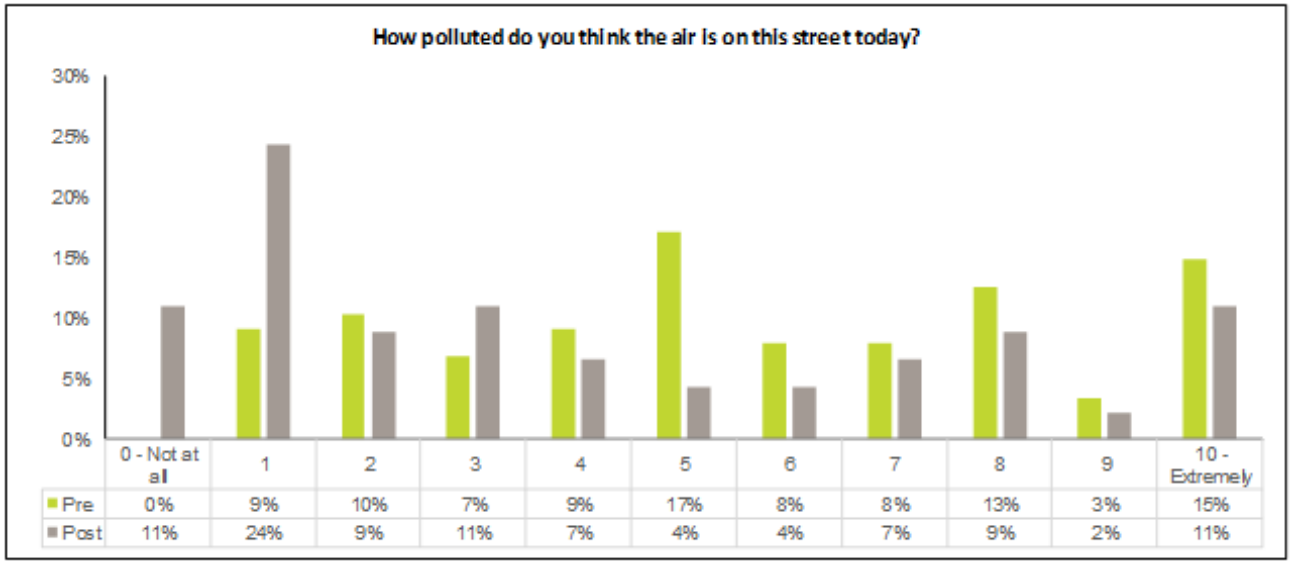
# Appendix; Resident and parents surveys – Air Quality

| | |
|---|---|
| **Pre surveys** | **29th January – 23rd February 2020**<br>**In person outside of St Mary's and online survey** |
| **Post surveys** | **25th April – 18th June 2021**<br>**Online survey only** |

| **Total Responses** | |
|---|---|
| **Pre** | 87 |
| **Post** | 45 |

**How polluted do you think the air is on this street today?**

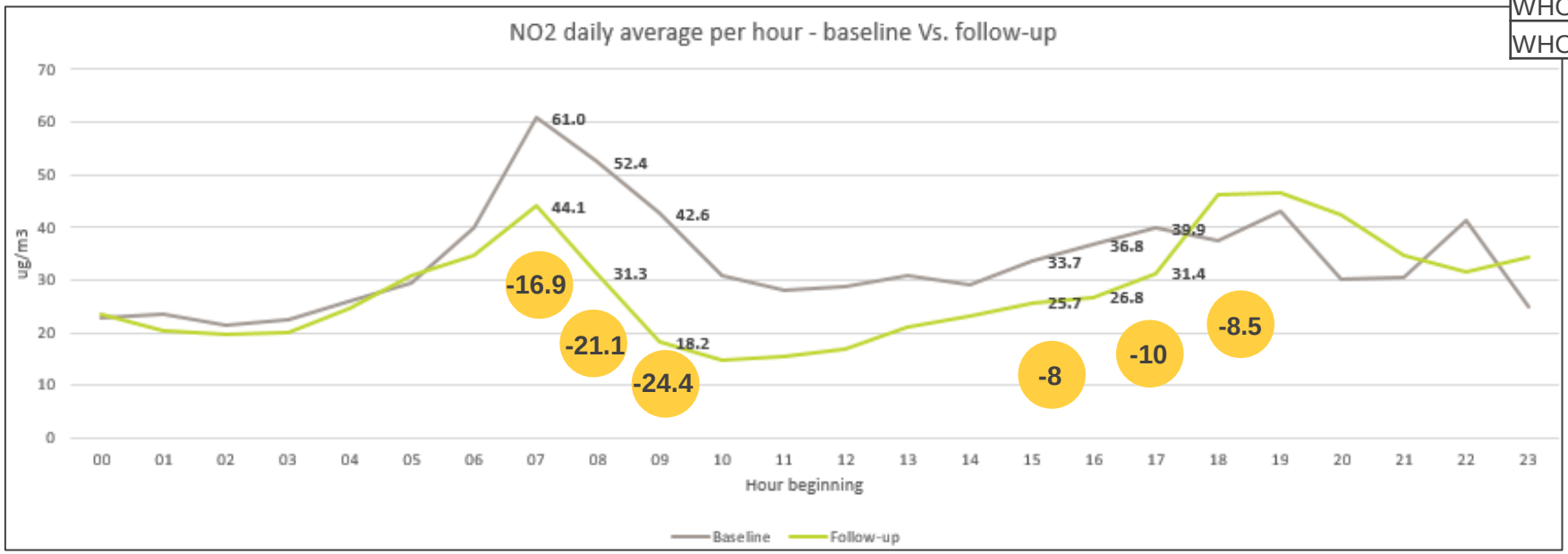
| Response | Pre | | Post | | % Point Change |
|---|---|---|---|---|---|
| | Freq | % | Freq | % | |
| **0- Not at all** | 0 | 0% | 5 | 11% | 11% |
| **1** | 8 | 9% | 11 | 24% | 15% |
| **2** | 9 | 10% | 4 | 9% | -1% |
| **3** | 6 | 7% | 5 | 11% | 4% |
| **4** | 8 | 9% | 3 | 7% | -3% |
| **5** | 15 | 17% | 2 | 4% | -13% |
| **6** | 7 | 8% | 2 | 4% | -4% |
| **7** | 7 | 8% | 3 | 7% | -1% |
| **8** | 11 | 13% | 4 | 9% | -4% |
| **9** | 3 | 3% | 1 | 2% | -1% |
| **10 – Extremely** | 13 | 15% | 5 | 11% | -4% |
| **Total** | 87 | 100% | 45 | 100% | |

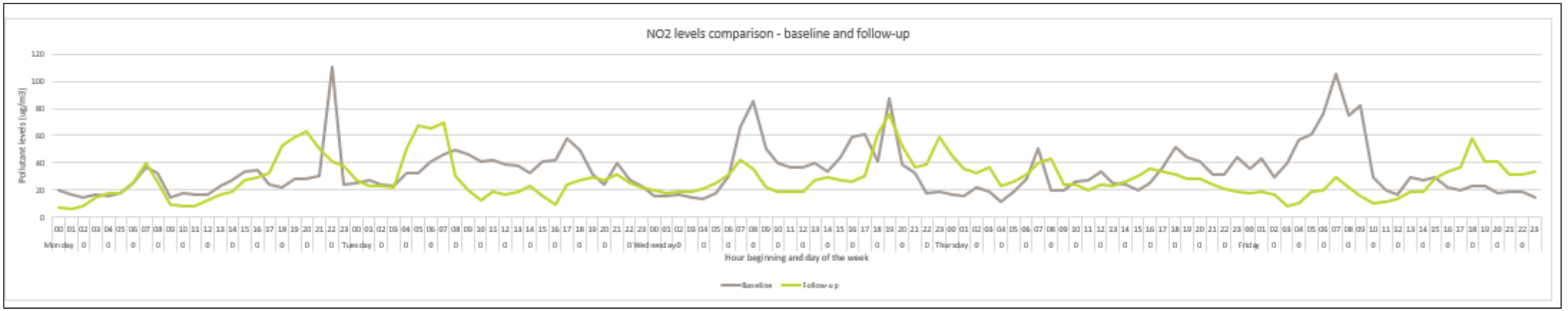


# Appendix; Air Quality

| | |
|---|---|
| **Baseline data** | **00:00 Monday 10th Feb 2020 – 23.59 Friday 14th February 2020** |
| **Follow up data** | **00:00 Monday 15th March 2021 – 23.59 Friday 19nd March 2021** |

| Overall Daily Average | µg/m3 |
|---|---|
| Baselline | 33.6 |
| Follow-up | 28.3 |
| WHO 2005 limit | 40 |
| WHO 2021 limit | 10 |

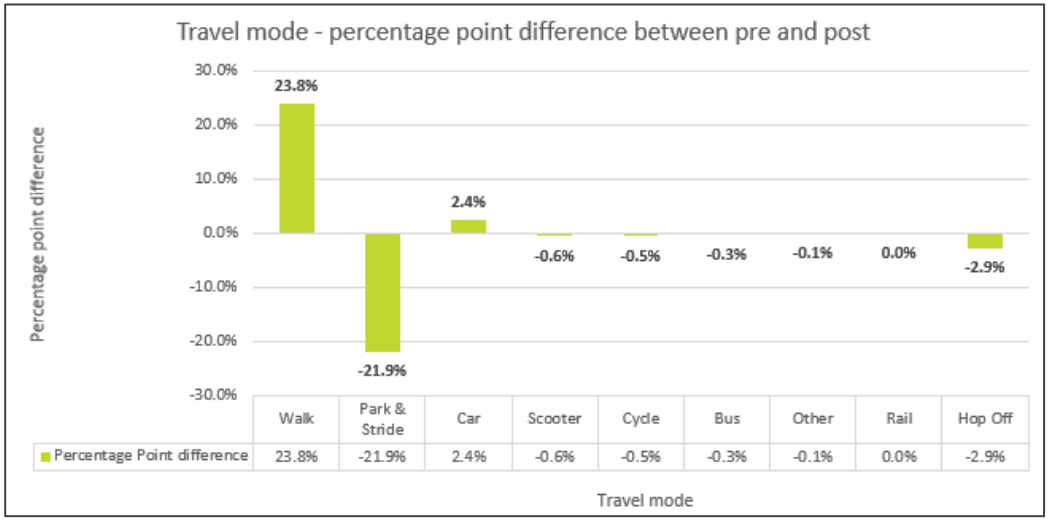


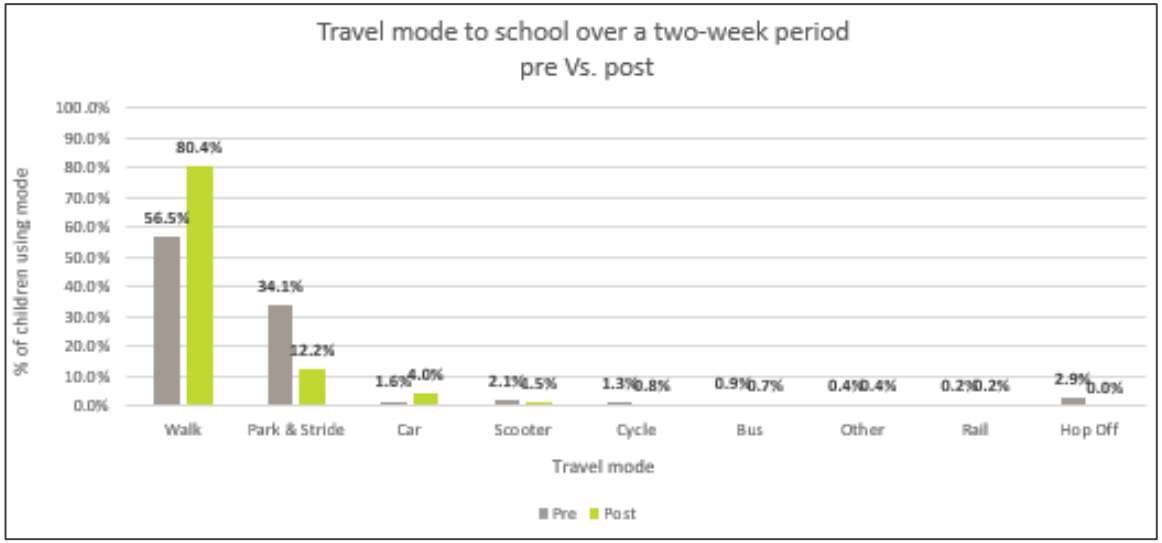



# Appendix; Modal Shift

| | |
|---|---|
| **Baseline Hands Up Survey data** | **Monday 24th February – Friday 6th March 2020** |
| **Follow-up Hands Up Survey data** | **Monday 7th June – Friday 18th June 2021** |

| | Walk | Park & Stride | Car | Scoot | Cycle | Bus | Other | Rail | Hop Off |
|---|---|---|---|---|---|---|---|---|---|
| **Pre** | 56.5% | 34.1% | 1.6% | 2.1% | 1.3% | 0.9% | 0.4% | 0.2% | 2.9% |
| **Post** | 80.4% | 12.2% | 4.0% | 1.5% | 0.8% | 0.7% | 0.4% | 0.2% | 0.0 |
| **Percentage point difference** | 23.8% | -21.9% | 2.4% | -0.6% | -0.5% | -0.3% | +0.1% | 0.0% | -2.9% |



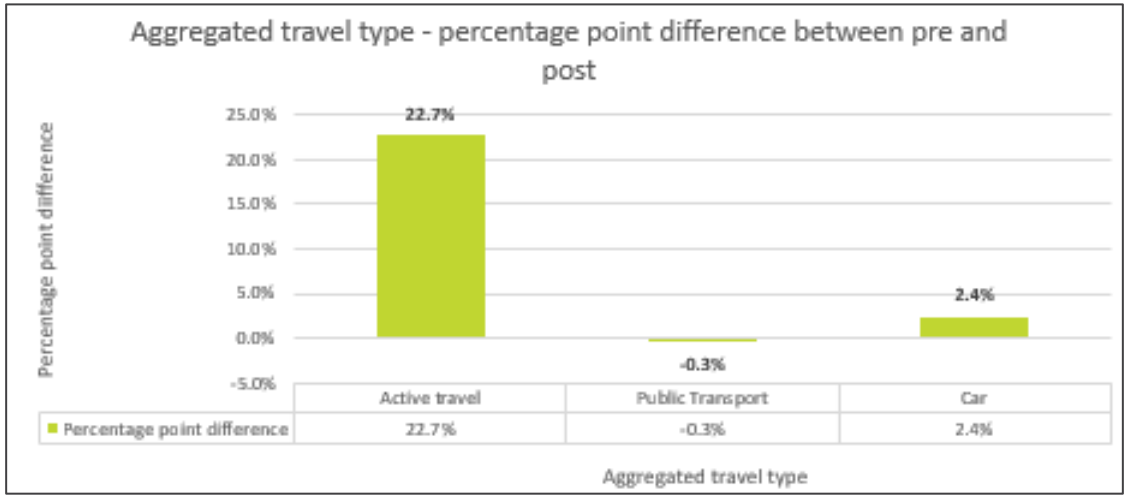



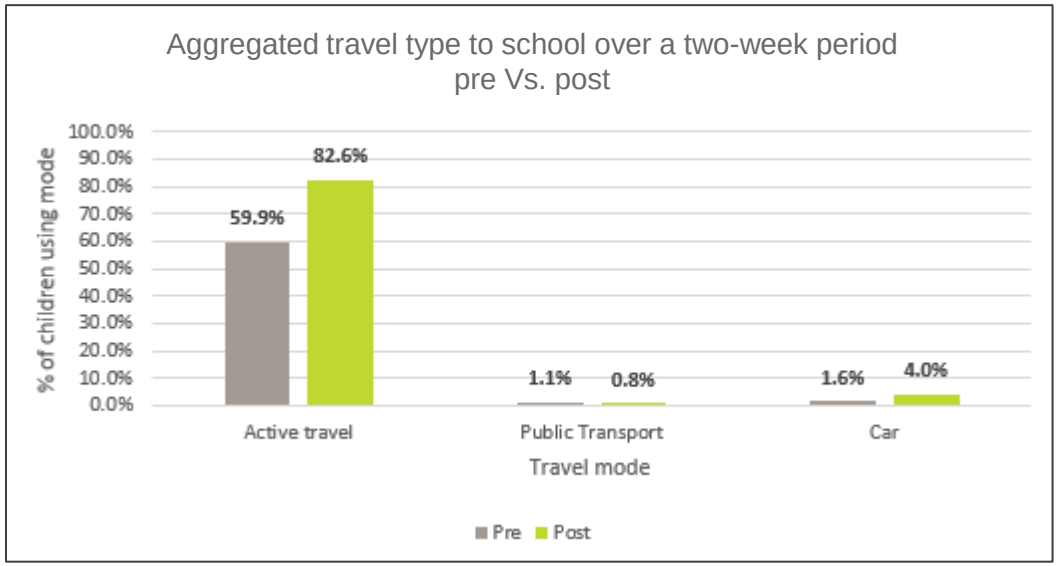
# Appendix; Modal Shift

| | |
|---|---|
| **Baseline Hands Up Survey data** | **Monday 24th February – Friday 6th March 2020** |
| **Follow-up Hands Up Survey data** | **Monday 7th June – Friday 18th June 2021** |

| | Active Travel | Public Transport | Car |
|---|---|---|---|
| **Pre** | 59.9% | 1.1% | 1.6% |
| **Post** | 82.6% | 0.8% | 4.0% |
| **Percentage point difference** | 22.7% | -0.3% | 2.4% |

**N.B. Active travel includes: Walking, Cycling and Scooting**



St Mary's School Street

# Appendix; Traffic Speed and Volume - North

| | |
|---|---|
| **Baseline data** | **Saturday 8th February – Friday 14th February 2020** |
| **Follow-up data** | **Saturday 24th April – Friday 30th April 2021** |

## Volume

### Average number of vehicles

| | PRE | POST |
|---|---|---|
| **Weekday** | 1120 | 980 (-140) |
| **Weekend** | 667 | 680 (+13) |

## Speed

### Average vehicle speed(mph)

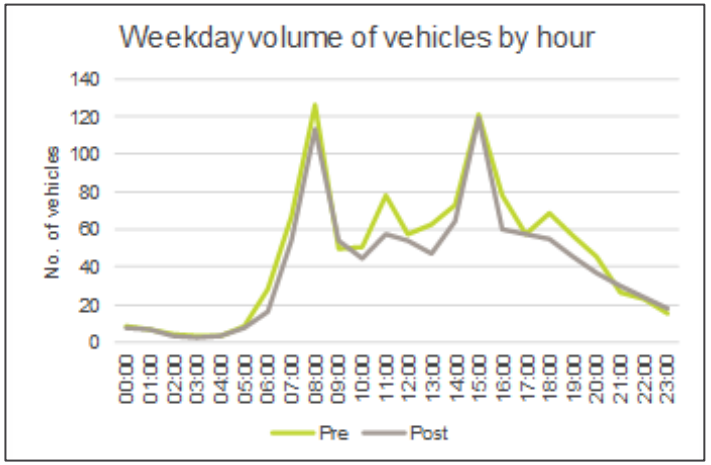
| | PRE | POST |
|---|---|---|
| **Weekday** | 17.8 | 17.4 (-2.2%) |
| **Weekend** | 18.4 | 18.2 (-1%) |

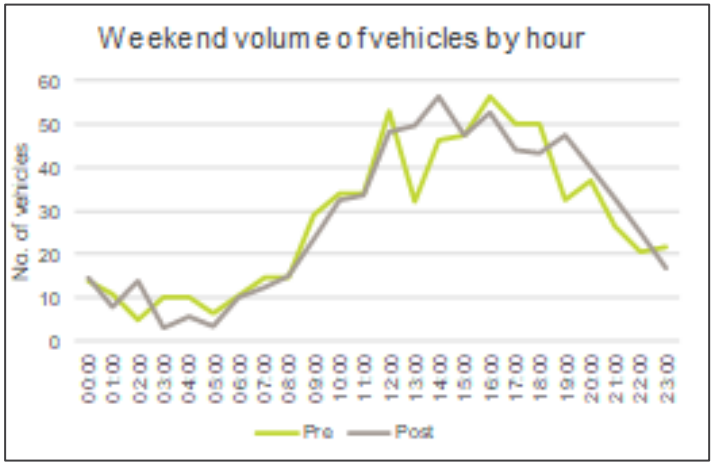
### Speed Limit Analysis

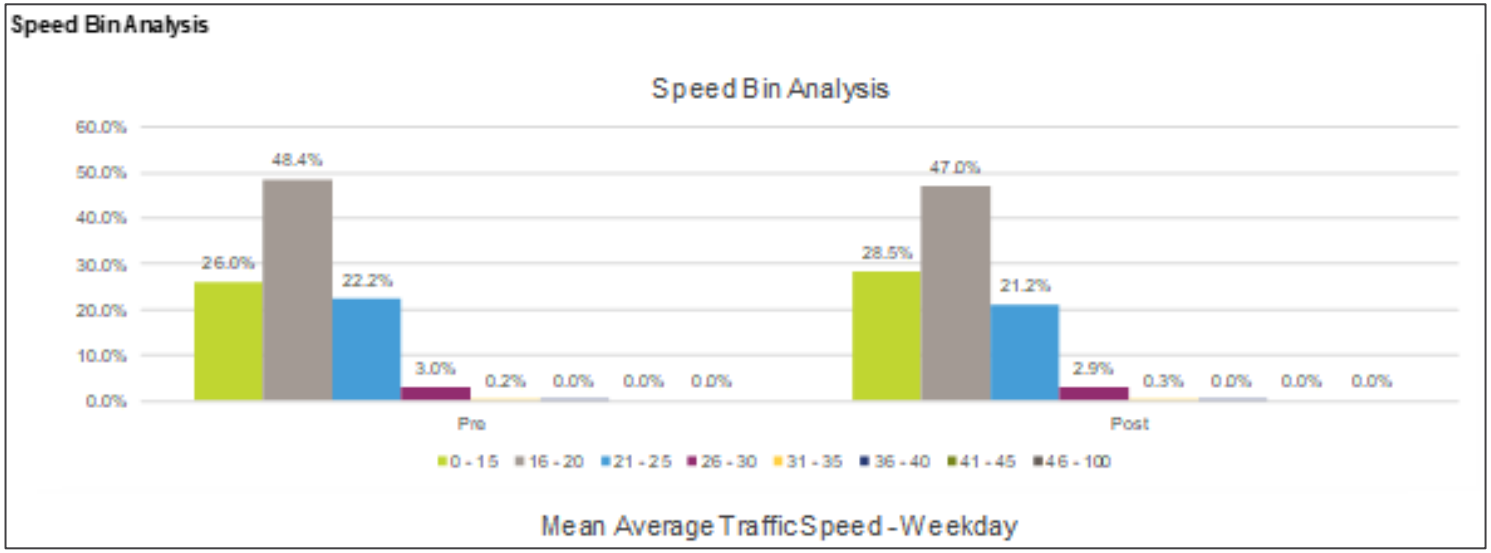
**25.5%** of vehicles were travelling over the speed limit at PRE

**24.5%** of vehicles were travelling over the speed limit POST

### Volume of vehicles by hour



# Appendix; Traffic Speed and Volume - South

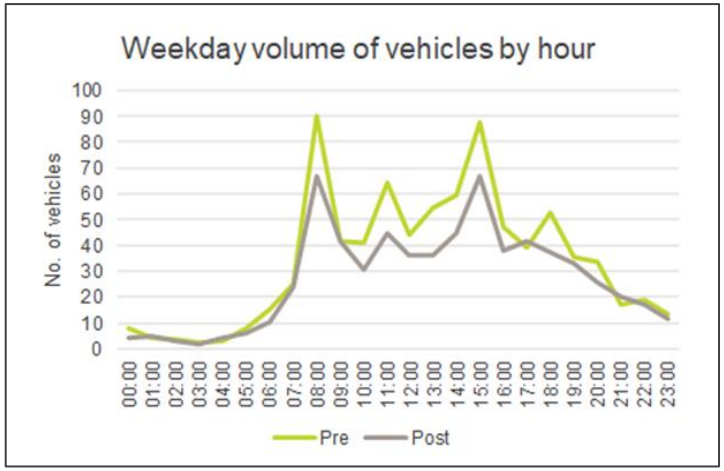
| | |
|---|---|
| **Baseline data** | **Saturday 8th February – Friday 14th February 2020** |
| **Follow-up data** | **Saturday 24th April – Friday 30th April 2021** |

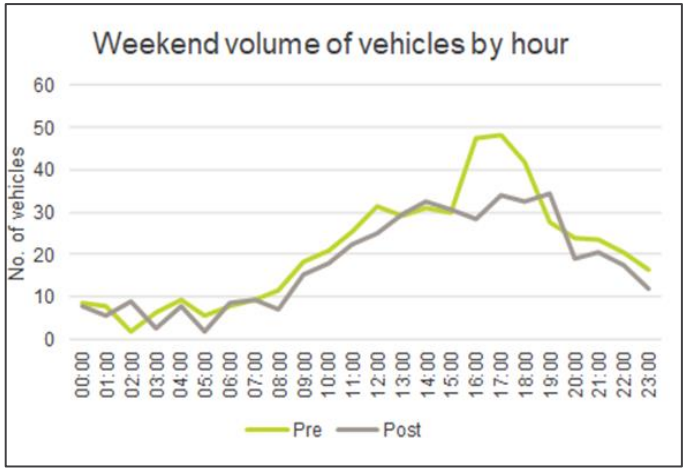
## Volume

### Average number of vehicles

| | PRE | POST |
|---|---|---|
| **Weekday** | 809 | 650 (-159) |
| **Weekend** | 505 | 432 (-73) |

### Volume of vehicles by hour

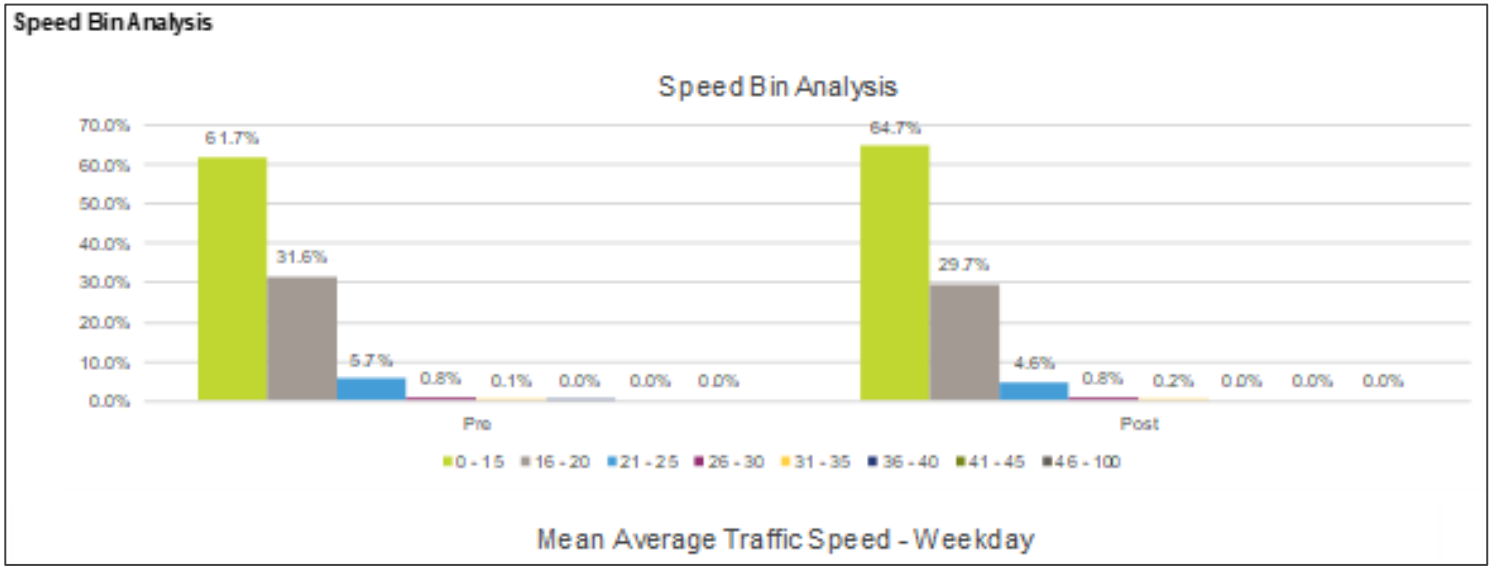



## Speed

### Average vehicle speed(mph)

| | PRE | POST |
|---|---|---|
| **Weekday** | 14.0 | 13.4 (-4.3%) |
| **Weekend** | 15.1 | 14.7 (-2.6%) |




### Speed Limit Analysis

**6.6%** of vehicles were travelling over the speed limit at PRE

**5.6%** of vehicles were travelling over the speed limit POST

## For more information, please contact south@Sustrans.org.uk


SOUTHAMPTON CITY COUNCIL

my Journey HELPING SOUTHAMPTON GET AROUND

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