SCHOOL STREETS

Improving the quality of life, challenging the dominance of the car

T

Induction Loop installed

Please switch your hearing aid to the T position

Organised by:

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SCHOOL STREETS

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Examining the data: How effective are School Streets at encouraging active travel, and improving road safety and air quality? Do they really improve people's quality of life?

Tanya Braun
Director of Policy and Comms
Living Streets

#schoolstreets

How effective are School Streets at encouraging active travel, and improving road safety and air quality?

Why we need to enable more children to walk to school

LIVING STREETS

LET'S WALK TO SCHOOL

Why we need School Streets

SCHOOL STREETS
YOUR GUIDE TO CREATING CAR-FREE SCHOOL STREETS

Discussing how effective School Streets are at encouraging active travel, and improving road safety and air quality:

Claire McDonald, School Lead, Mums for Lungs

Mahalia Sterling, Principal City Planner, Transport for London

Asa Thomas, Researching Doctorate on School Streets, University of Westminster

Nicola Mastini, Principal Consultant, Smart Transport Hub

Get in touch!

Tanya Braun
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LIVING STREETS

LET'S WALK TO SCHOOL

Examining the data: How effective are School Streets at encouraging active travel, and improving road safety and air quality? Do they really improve people's quality of life?

Claire McDonald
School Lead
Mums for Lungs

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- **Who are Mums For Lungs?**
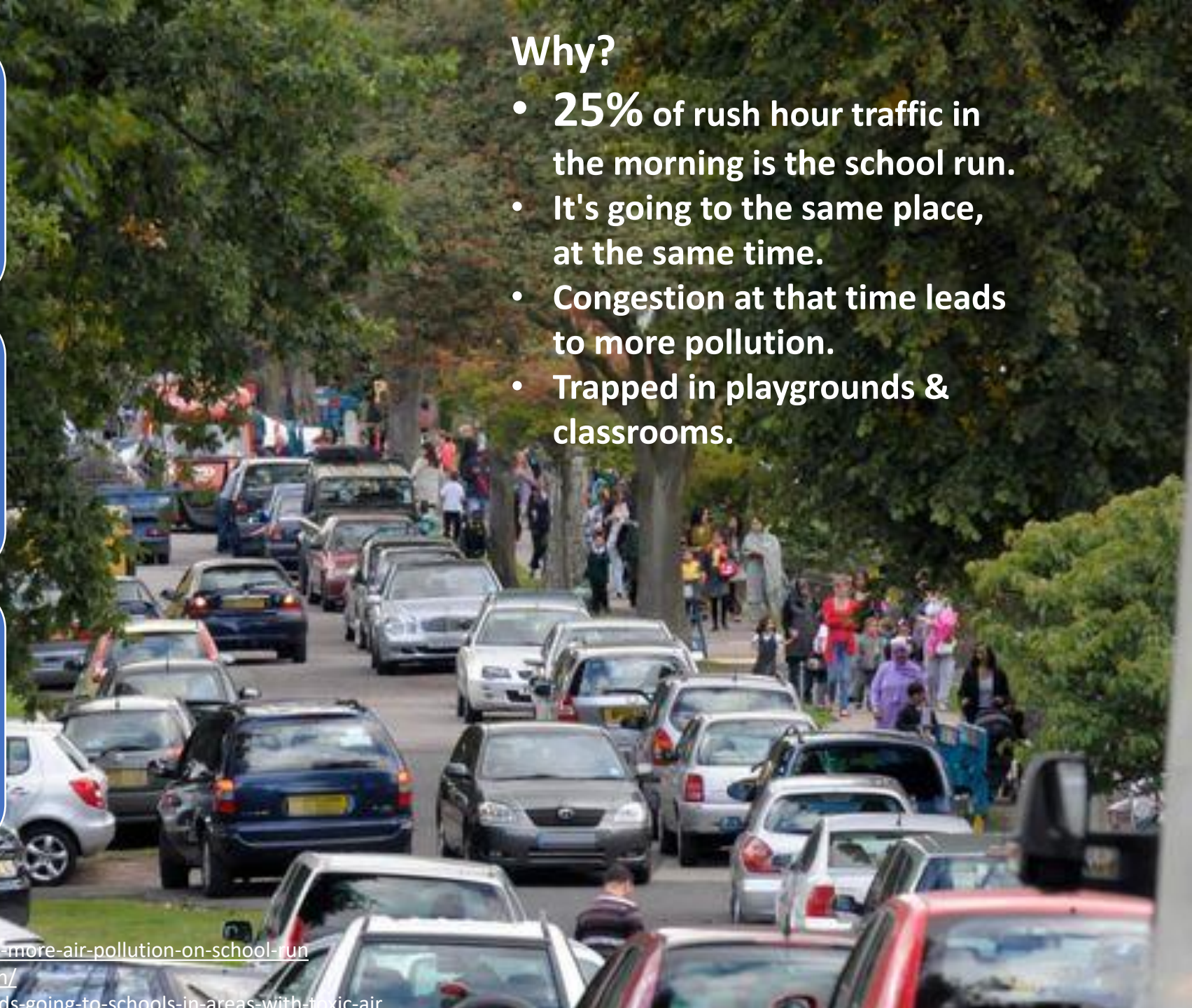- **What is air pollution?**
- **And how does it affect children?**

Children are exposed to 5x more air pollution during the school run than at any other time [1].

60% of the air pollution children are exposed to daily is on the school run and at school [2].

98% of schools in London exceed WHO pollution limits, compared to 24 per cent outside of London [3].

Why?
- **25%** of rush hour traffic in the morning is the school run.
- It's going to the same place, at the same time.
- Congestion at that time leads to more pollution.
- Trapped in playgrounds & classrooms.

[1] https://www.kcl.ac.uk/news/children-exposed-to-five-times-more-air-pollution-on-school-run
[2] https://www.unicef.org.uk/publications/the-toxic-school-run/
[3] https://www.london.gov.uk/press-releases/mayoral/31m-kids-going-to-schools-in-areas-with-toxic-air

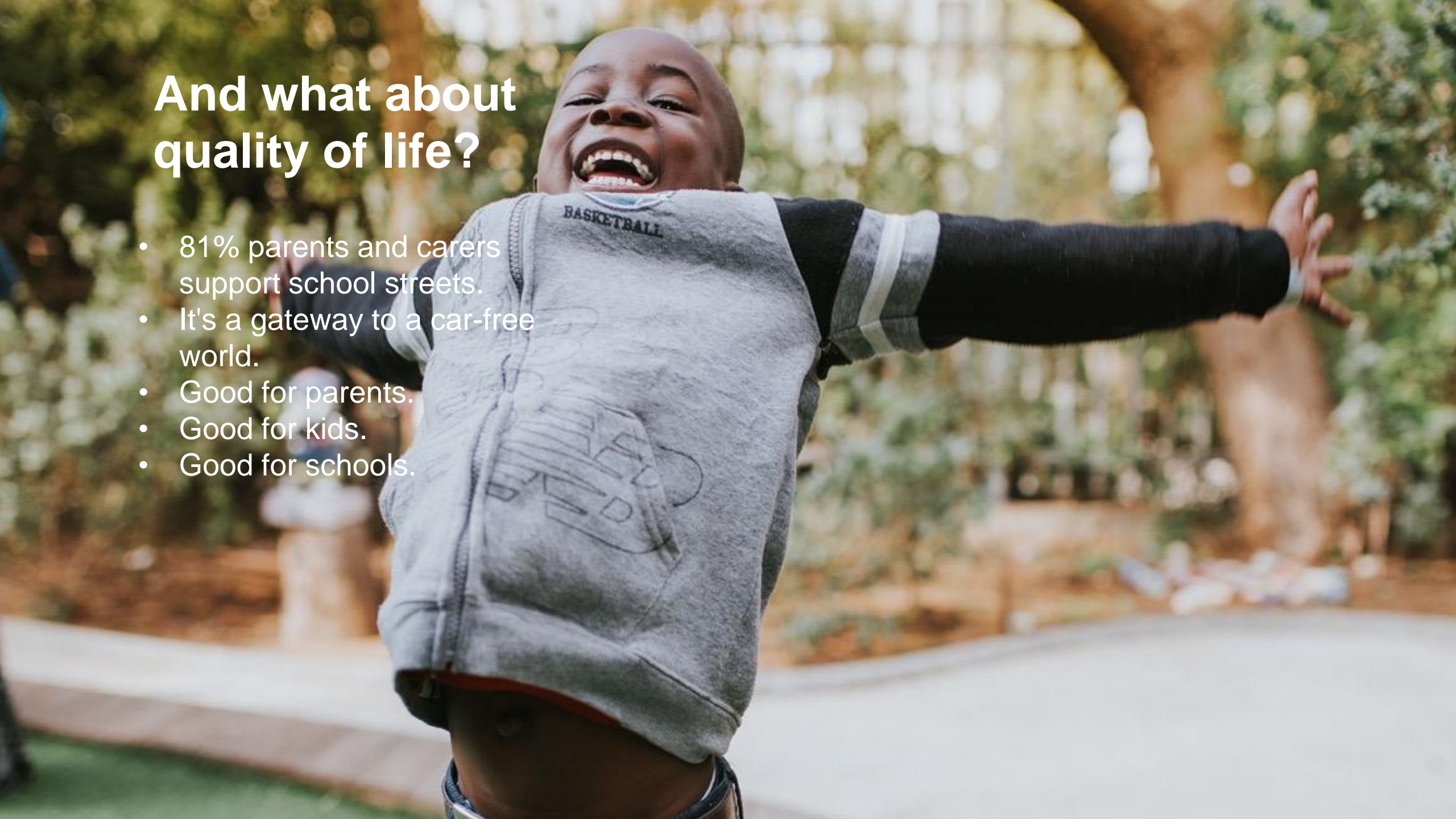# How effective are school streets at improving air quality?

- Very! 23% reduction in Nitrogen Dioxide.
- Not suprising: 18% of parents/carers drove less.
- 27% of parents said they walked more because of the school street.
- And 6% cycled more.

And what about quality of life?

- 81% parents and carers support school streets.
- It's a gateway to a car-free world.
- Good for parents.
- Good for kids.
- Good for schools.

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Mahalia Sterling
Principal City Planner
Transport for London

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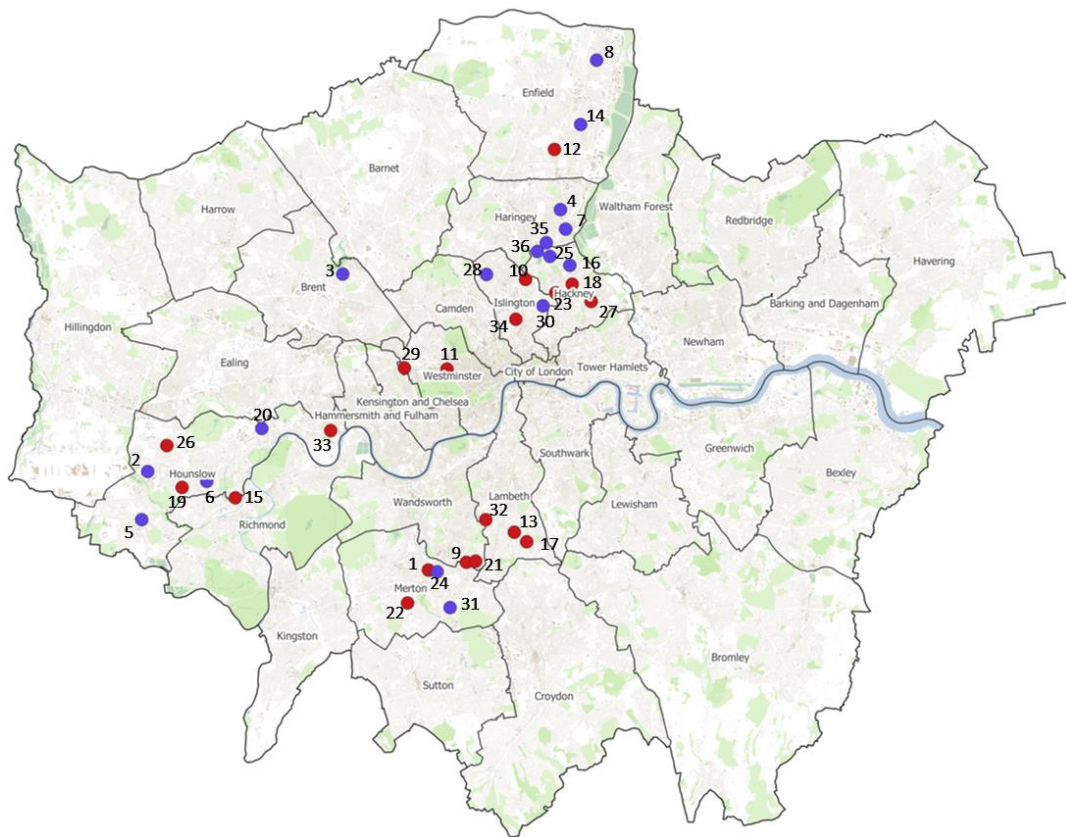
Observing School Streets.

Mahalia Sterling
Principal City Planner, Transport for London

School Streets evaluation 2021

Parents/carers from 35 schools across London took part in a survey to explore parents' awareness, attitudes and any changes to their travel behavior as a result of School Streets.

School Streets
Intervention Sites vs. Control Sites

February 2021

TRANSPORT FOR LONDON

Borough	Total	Intervention	Control
Inner	253	209	44
Outer	243	66	177
Lambeth	115	115	0
Hounslow	108	26	82
Merton	78	24	54
Islington	60	37	23
Hackney	34	13	21
Wandsworth	24	24	0
Enfield	23	16	7
Haringey	20	0	20
Westminster	20	20	0
Brent	14	0	14

School Streets qualitative research 2022

Qualitative research: A deep dive of five School Street schemes, to understand experiences of key stakeholder groups and what factors have helped/hindered the planning, delivery and successful operation of the scheme

Getting to know School Streets: An in-depth review of the five School Streets consisting of the description of the scheme, photographs, experiences in delivering, operating and using School Streets, and summary of the quantitative findings.
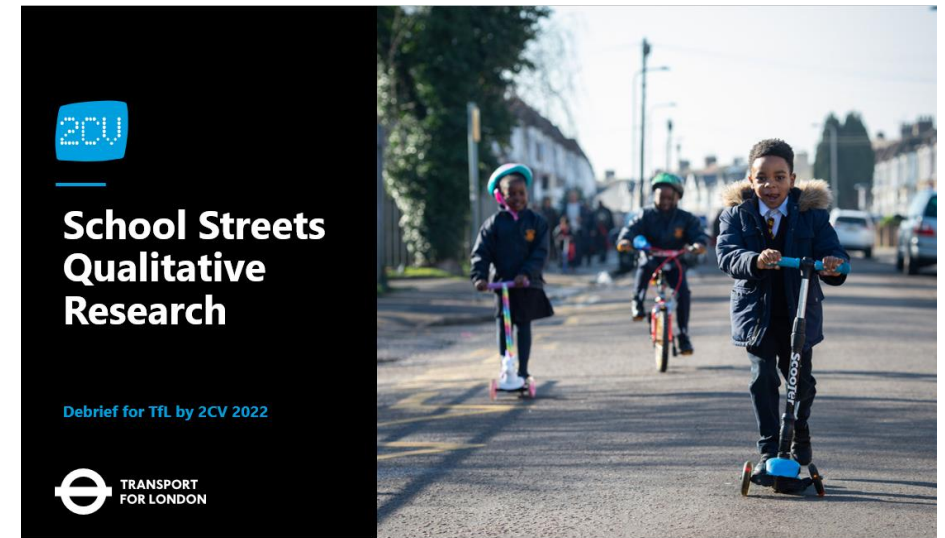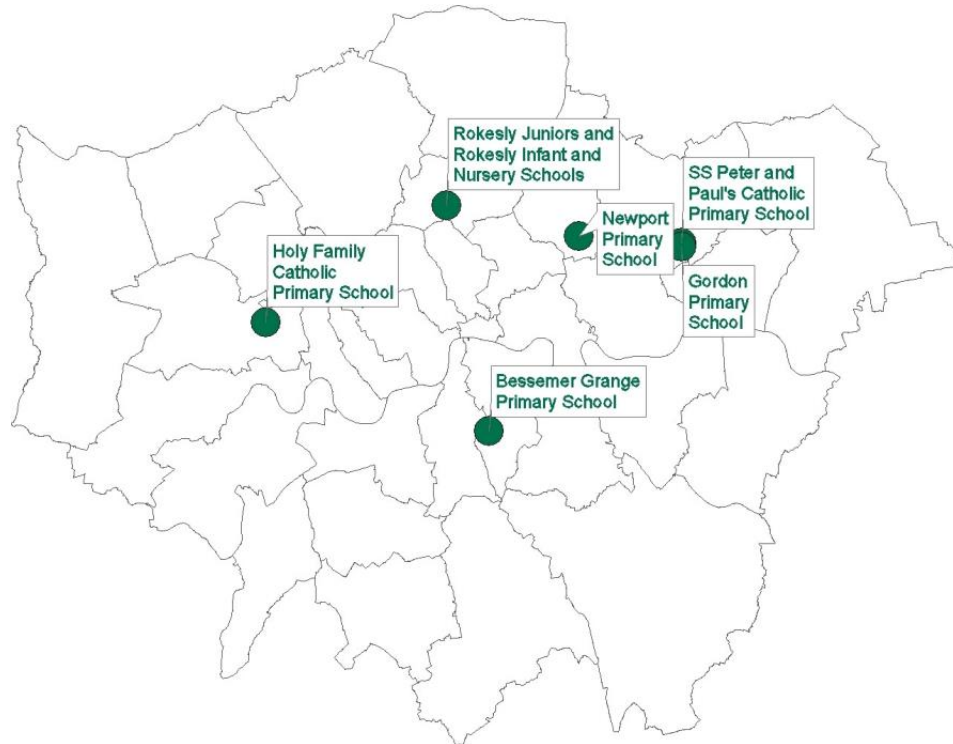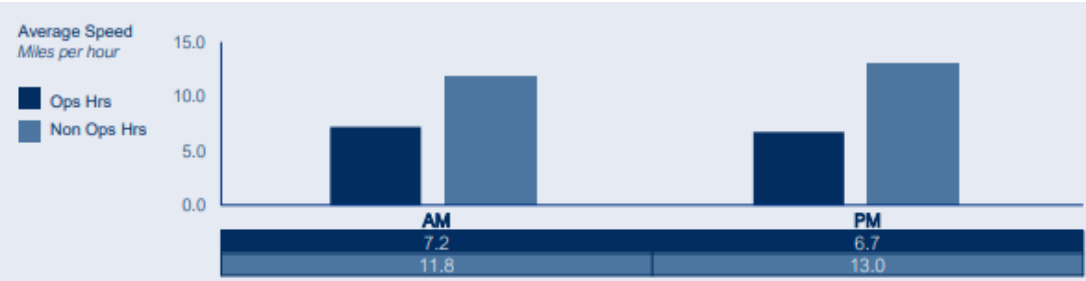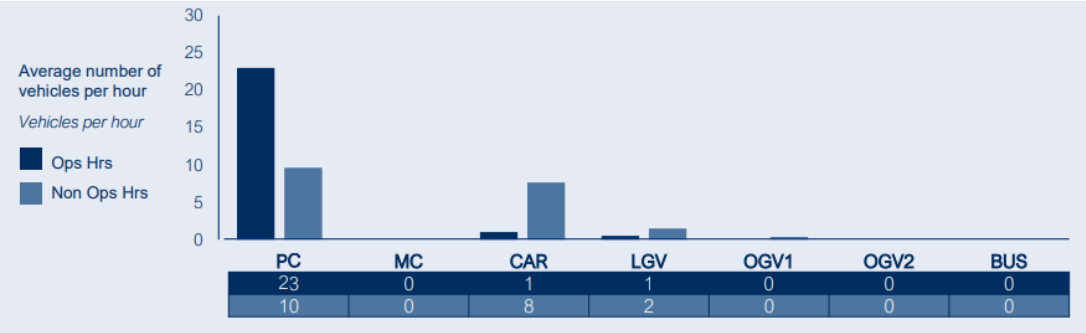
So how effective are school streets?

Encouraging active travel

Restriction of motor vehicles create **low traffic environments**, where pedestrians and cyclists feel **safe** and **encouraged** to walk, cycle or scoot their journey to or from school.

	PC	MC	CAR	LGV	OGV1	OGV2	BUS
Ops Hrs	23	0	1	1	0	0	0
Non Ops Hrs	10	0	8	2	0	0	0

Average number of vehicles per hour
Vehicles per hour

	AM	PM
Ops Hrs	7.2	6.7
Non Ops Hrs	11.8	13.0

Average Speed
Miles per hour

*"**Less congestion** on the school street section it is implemented on and makes that section immediately outside the school **much safer.**"*

'Now, because of the bit that's closed off, we can cycle on the road. This is so exciting for the children, they feel really grown up and to me it feels OK, it feels safe. It is such a massive difference.'
Parent, St Peter & Paul, Redbridge

Over two days of monitoring, the average number of motorised vehicles per hour at Bessemer Grange primary school was 82% lower during the closure period than outside it. Speeds also reduced during the drop off and pick up times, and increased number of pedal cycles were observed

Improving road safety

Alongside low traffic environments, the reduction in traffic and speeds creates a **safer** and **calmer** for environment for pedestrians and cyclists to feel **comfortable** to access and use the School Street.

Over two days of monitoring, pedestrians and people on bikes comfortably use both the pavement and road to approach the school.

'Watching my son cross the road, he's much more comfortable because he can see when it's safe and I feel more confident letting him go independently. *Parent, Rokesley, Haringey*

'I wanted to cycle, but it was very stressful, with 3 little ones. They'd be all over the place and you just have to be on high alert all the time.' *Parent, St Peter & Paul, Redbridge*

Improving air quality

Combined with low traffic environment, **reduction in idling** outside of the school allows for a cleaner air environment, reducing exposure to air pollution

Air Quality
CONSULTANTS

Air Quality Monitoring Study:
London School Streets

March 2021

Experts in air quality
management & assessment

'It felt polluted and dangerous and scary. It was very stressful.' *Parent, Rokesley, Haringey*

'The air smells better. Parents would get here and sit for 45 minutes with their engines on. They're not doing that any more.' *Parent, Rokesley, Haringey*

'We had a lot of idling by the school gates.' *School staff, Bessemer, Southwark*

Air Quality monitoring study (2021) published by City Hall found, closing roads during the drop off and pick up times, reduced nitrogen dioxide levels by up to 23%

Improving quality of life

Overall, our research found that School Streets are seen as a positive step towards a safer, calmer, cleaner and more healthy local area that encourages active lifestyles, greater road safety and positive atmosphere

'The feeling outside school changed very quickly, it was calm, it was quiet… It's been transformational for the school community.' *School staff, Holy Family, Ealing*

'Now there's a really nice positive start to the day. It's improved the start and end of the day enormously.' *School staff, Newport, Waltham Forest*

It's a calmer environment, it's more social, there's room for parents to talk. It's changed the way the roads operate and impacted the whole area, residents aren't beeping their horns like they used to – Borough Officer, Waltham Forest

It feels like the whole street is part of our school now – School staff, Bessemer Southwark

The barriers helped to make it a community thing. It was great. The kids really got into it, I actually loved doing it and it helped understand the scheme better, everyone took responsibility – parent, Holy Family, Ealing

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Researching Doctorate on School Streets
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#schoolstreets

Do School Streets lead to more Active Travel and less driving?

Asa Thomas

PhD Researcher

Active Travel Academy

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Context

– Lots of really important research has emerged around School Streets in the last 3 years

  – Air quality

  – Parental perceptions

  – Use of space

  – Road safety

  – Traffic displacement

  – Equity

– Remaining significant question around mode shift.

-Previous meta analysis estimated a 3-6% reduction in car travel associated with each School Street (Hopkinson et al. 2021).

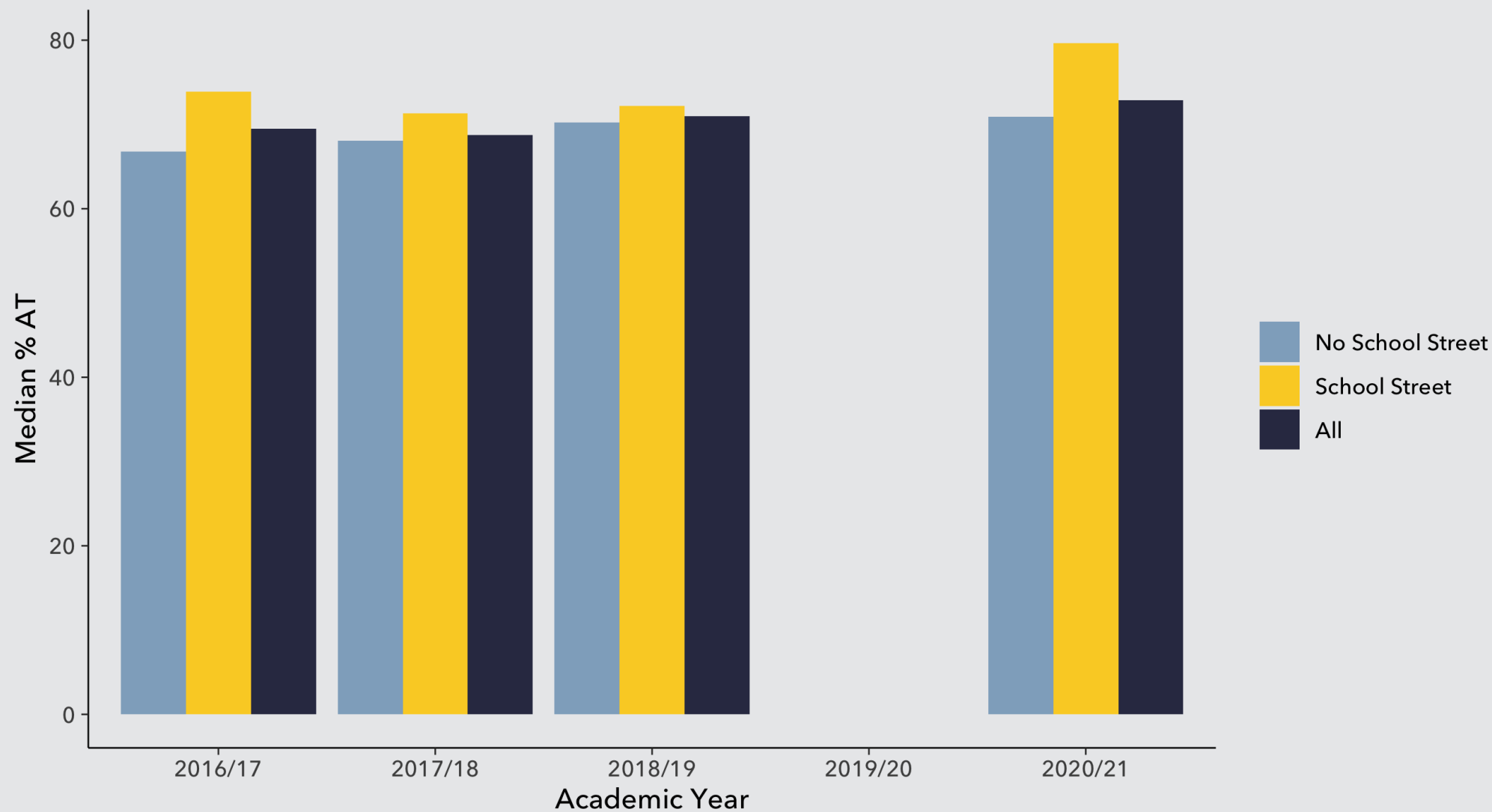-From a relatively small sample of local authority monitoring documents (of which there is generally very little published)
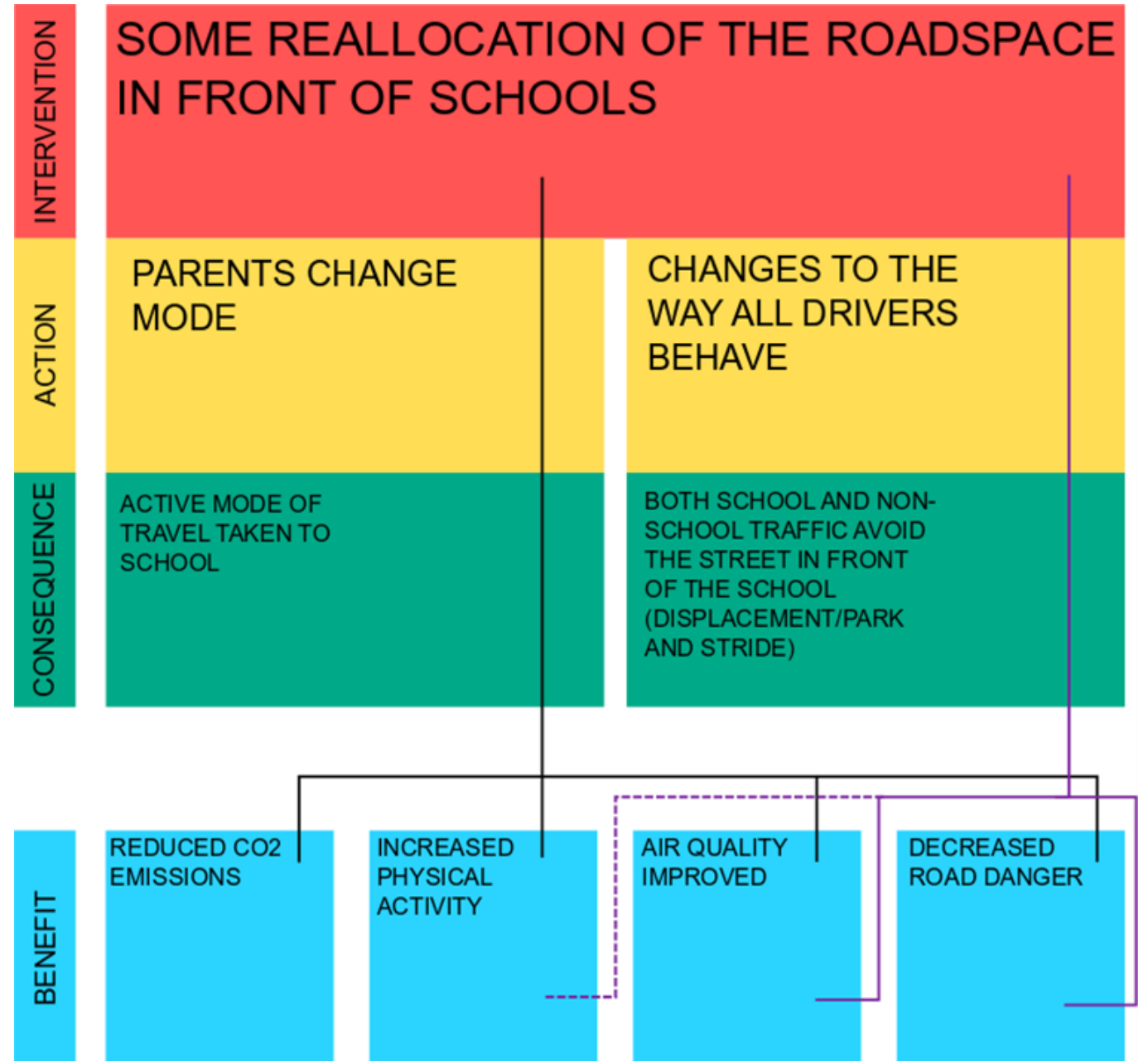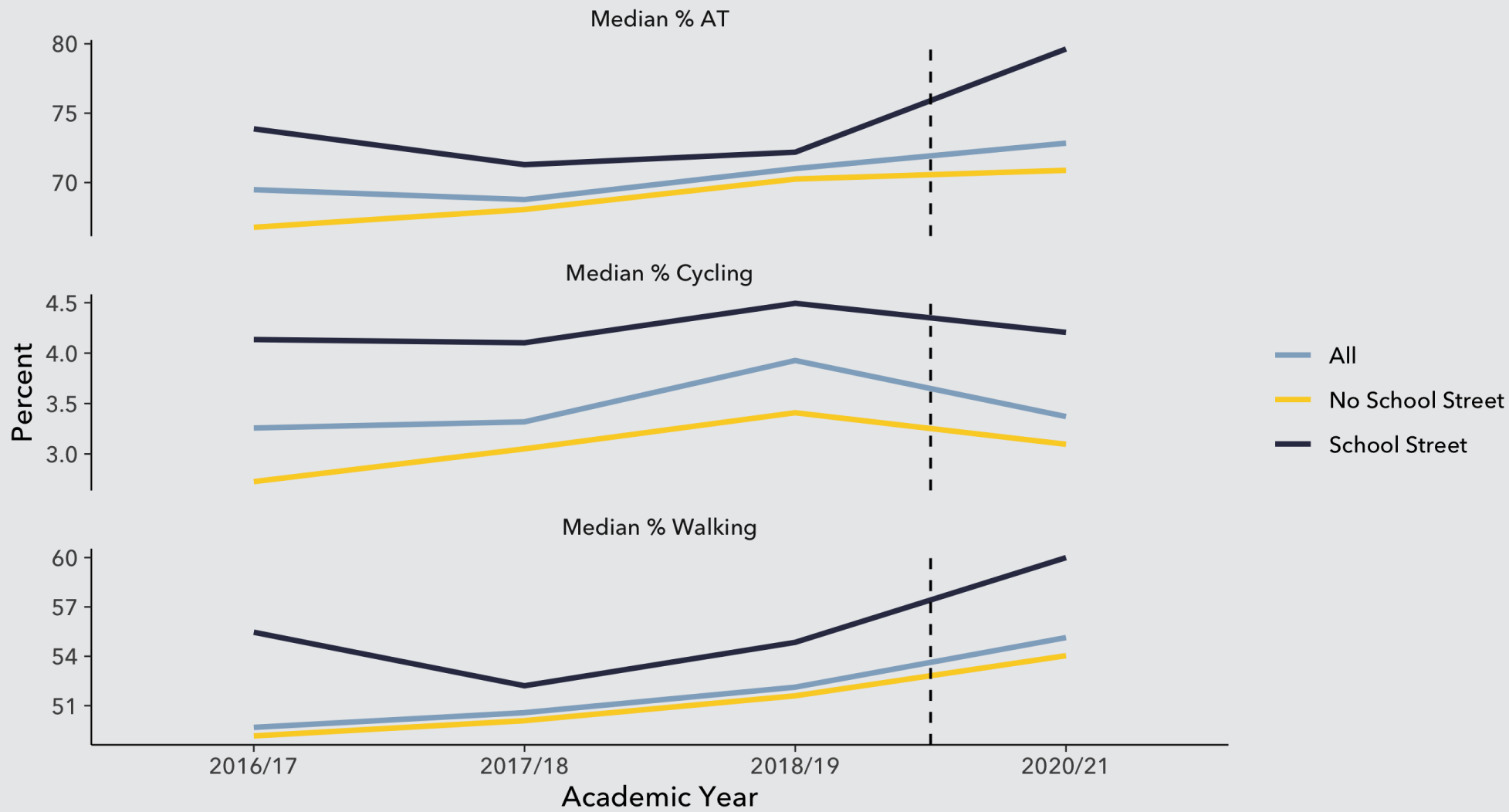
TfL STARS Data

– Imperfect but valuable resource of mode of travel to surveys.

– Between academic years 2016/17 and 2020/21 (inclusive) there have been 1626 eligible surveys from 509 different schools (removing some for response rate issues and from 19/20) .

– Some years missing, and significantly affected by Covid.

– However, 110 schools have surveys conducted in years before and after the introduction of a school street, with a further 396 that have comparable data without school Streets.

– Close to the broader proportion of School Streets in the city.

– Significant improvement on current sources.

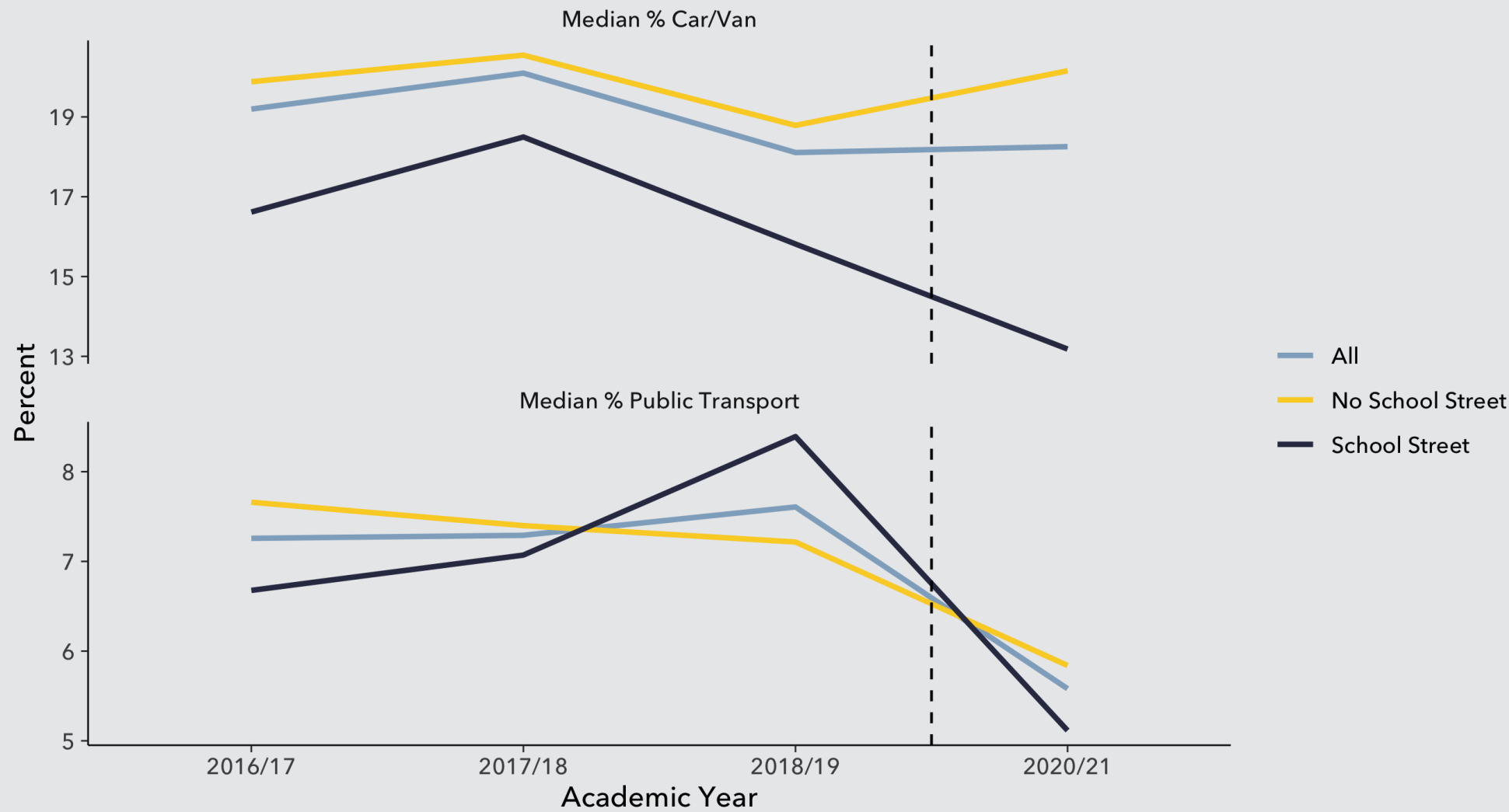**Emerging Trends in London School Travel**

– Promising trends (aside from PT) are even more pronounced for schools with School Streets.

– However, this doesn't necessarily tell us about the role of School Streets in this change.

– Compare change in travel before and after School Street, with a comparable time period for non-school street schools.

– Covid is also a confounder.

– "Before" survey = last valid survey from before 2019/20 School Year.

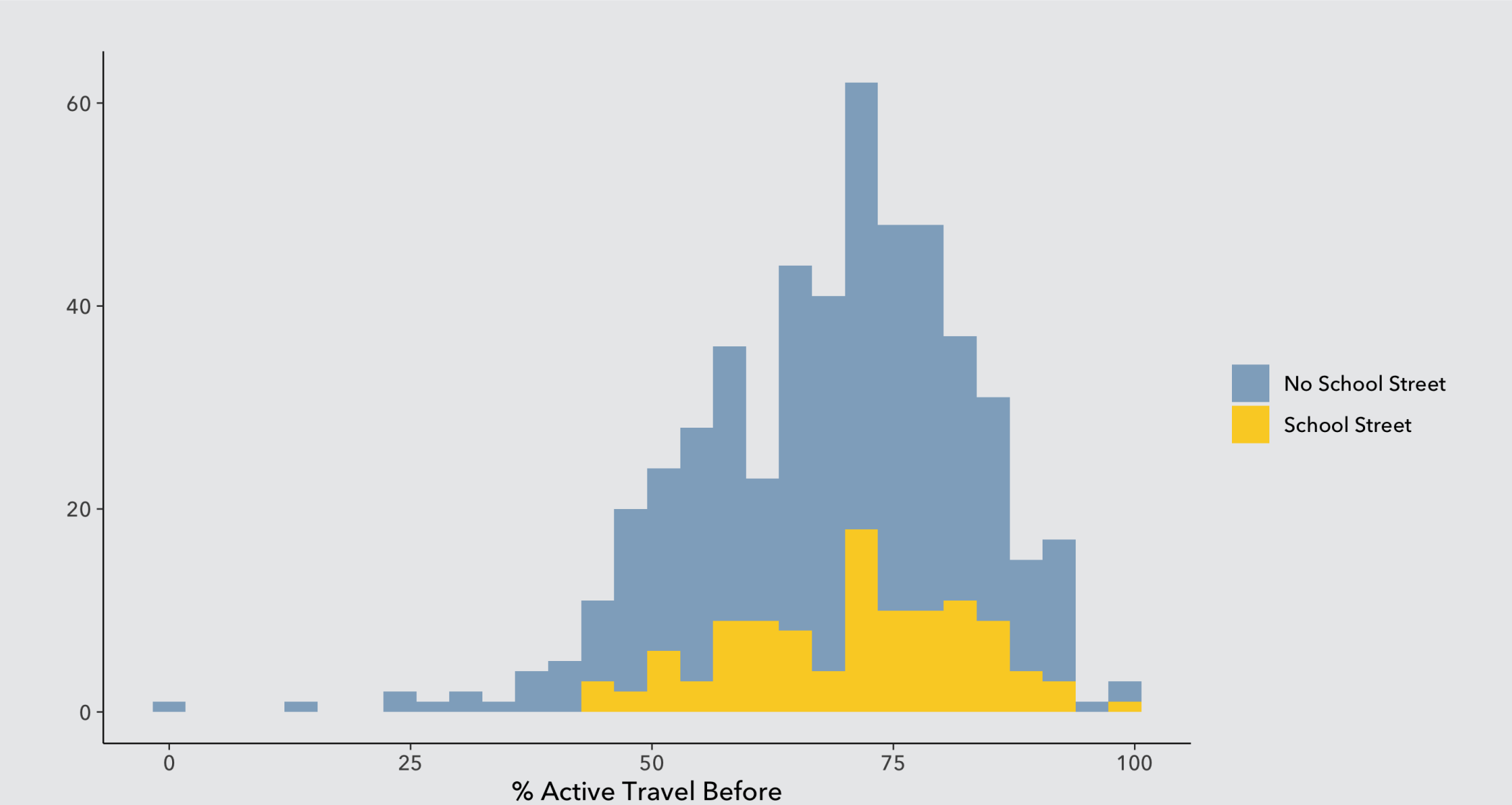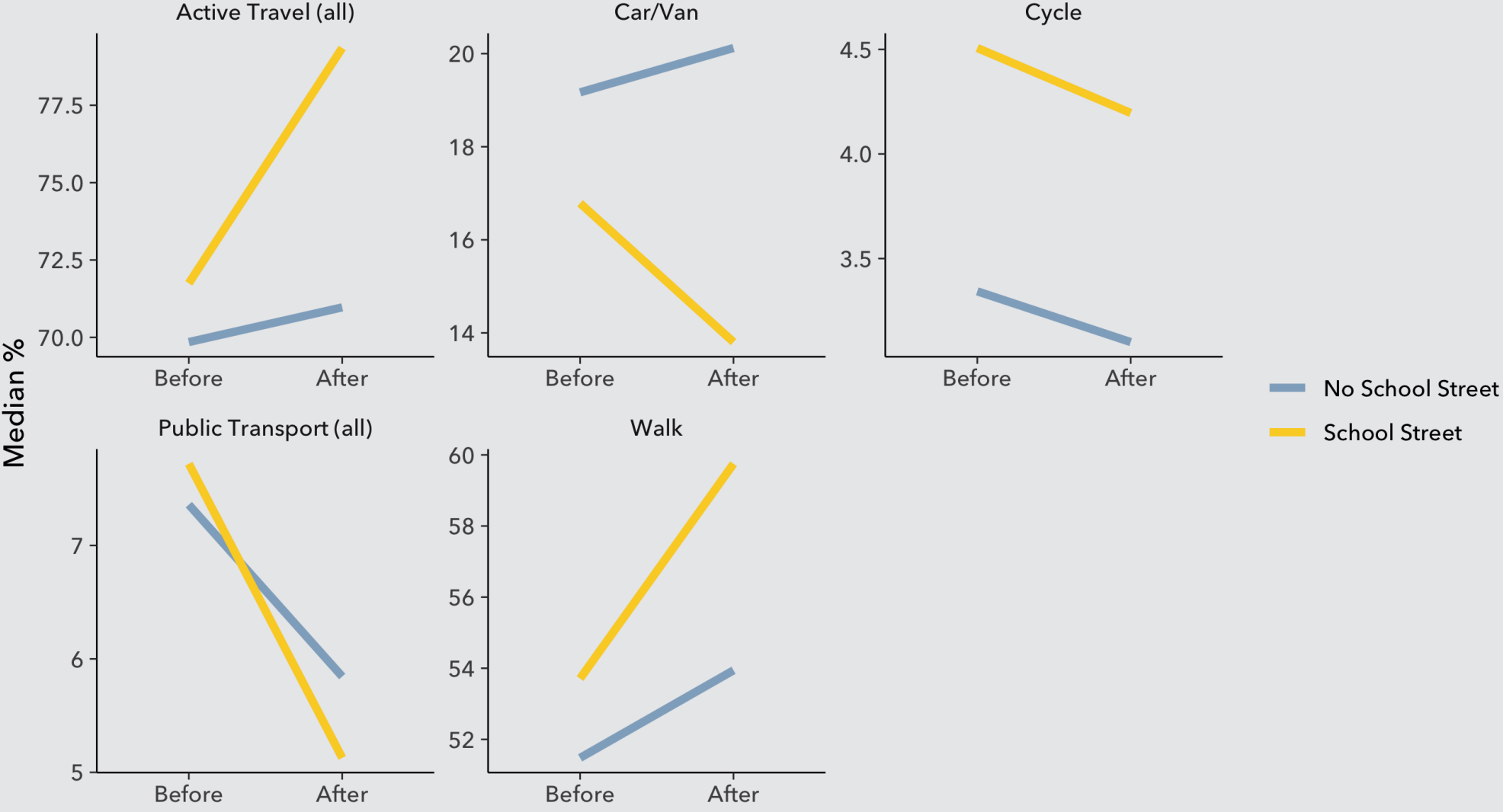– "After" survey from 2020/2021 (if also after a School Street).

Group 1
– Observation 1 Before Covid
– Observation 2 "post" Covid

Group 2
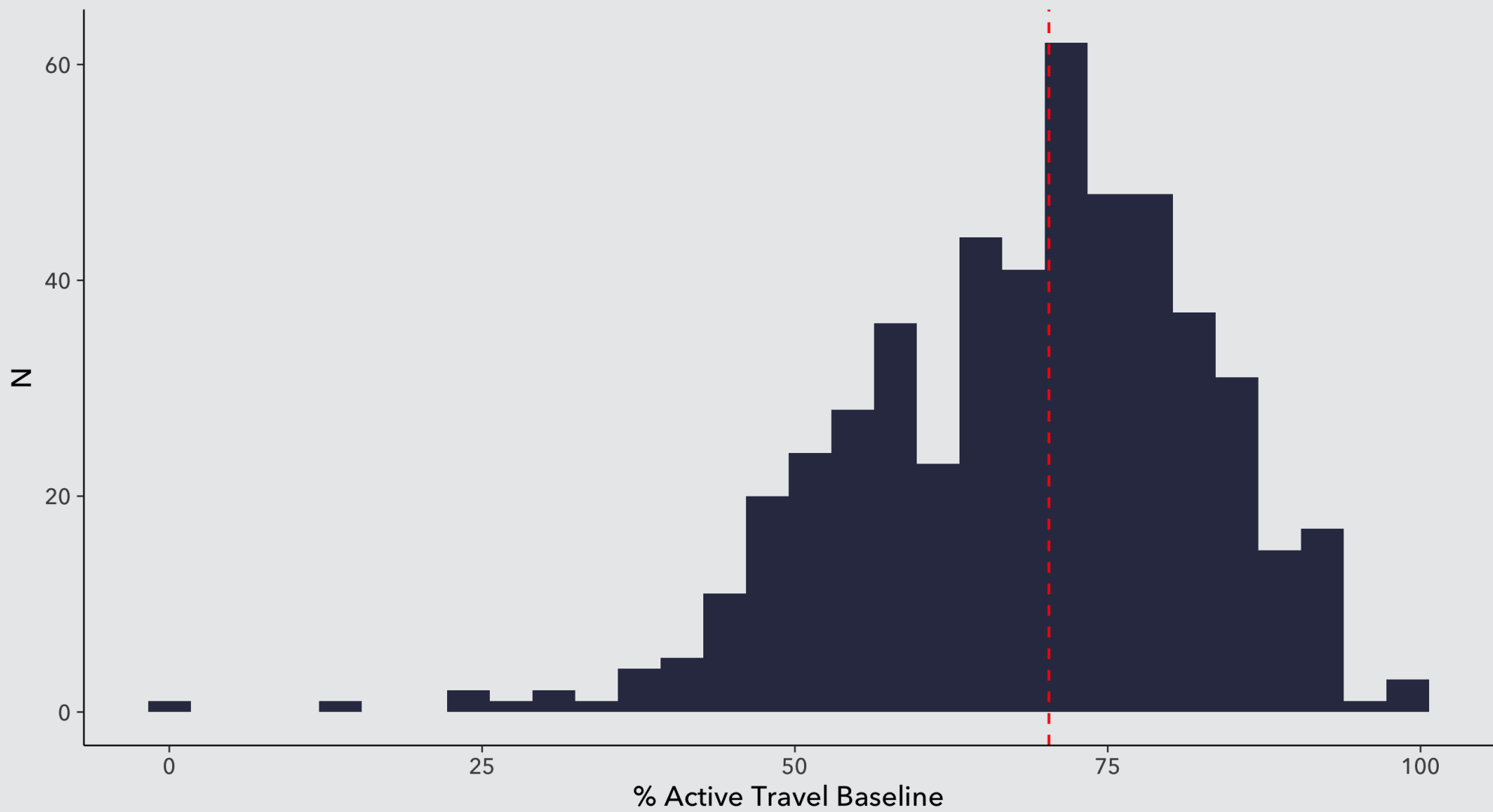– Observation 1 Before Covid, Before School Street
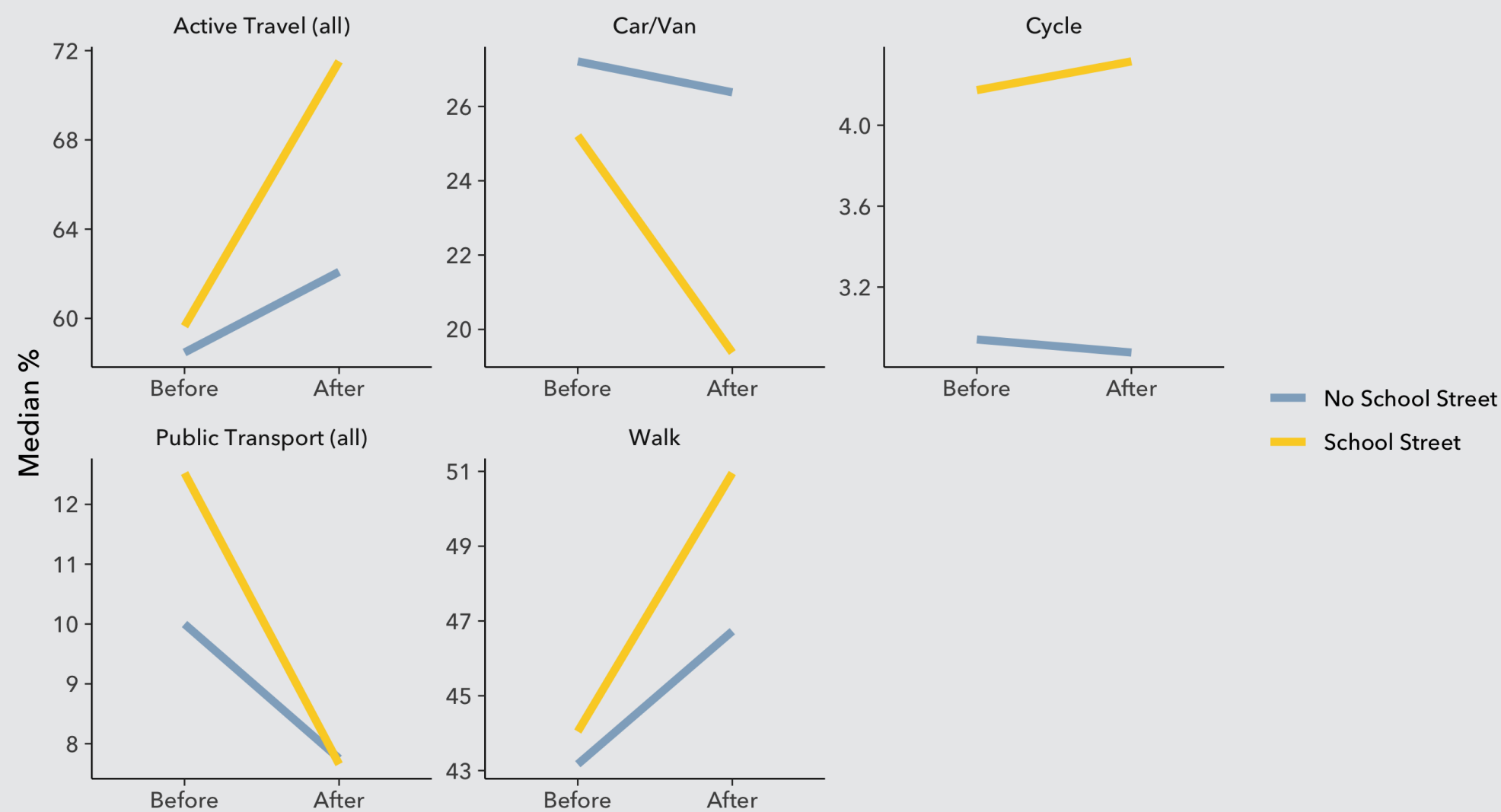– Observation 2 After Covid, After School Street

% Active Travel Before

No School Street

School Street

Assessing this scale of mode shift.
Median %

		Before	After	Change	Difference	Change (bottom 50%)	Difference (bottom 50%)
Cycle	No School Street	3.3	3.1	-0.1		0.3	
	School Street	4.5	4.2	0.4	0.4	0.7	0.4
Walk	No School Street	51.5	53.9	3.3		3.4	
	School Street	53.7	59.7	5.2	1.9	7.6	4.2
Active Travel (all)	No School Street	69.8	71.0	1.6		4.5	
	School Street	71.7	79.4	5.4	3.8	14.4	9.9
Public Transport (all)	No School Street	7.4	5.8	-1.3		-2.3	
	School Street	7.7	5.1	-1.8	-0.6	-3.5	-1.2
Car/Van	No School Street	19.2	20.1	0.5		-1.5	
	School Street	16.8	13.8	-1.8	-2.3	-6.6	-5.1

Tentative Conclusions

– Some positive modal change above background trends for School Street schools.

– Changes are, however, modest.

Next steps

– Analysis of Inner and outer London.

– Statistical model, accounting for differences in built environment indicators.

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About Smart Transport Hub

A transport consultancy that specializes in collecting data including research, analyses, and presentation of transportation data and insights. This ensures our clients can make data-led decisions to successfully deliver their active travel schemes.

Achievements

british parking awards 2021 WINNER

UKRI — Innovate UK

HM Government G-Cloud 13 Supplier

interface www.interface-nrm.co.uk ISO 9001 CERTIFICATION

UKAS MANAGEMENT SYSTEMS

Partners

Kent County Council

h&f hammersmith & fulham

Leeds CITY COUNCIL

ISLINGTON

Lewisham

Newcastle City Council

Newham London

Bath & North East Somerset Council

THE BRIGHTER BOROUGH Wandsworth

CROYDON

City of Westminster

ENFIELD Council

LONDON BOROUGH OF RICHMOND UPON THAMES

Importance of Data Collection

In the current financial and political context, collecting hard data which can validate and help understand the need and impact of School Street schemes is very important.

In fact, the Local Authorities need data to:

➤ **PRIORITISE** the most necessary interventions between the different potential options
➤ Create a strong case to apply for **FUNDING**
➤ **MONITOR** the outcomes of a School Street scheme ensuring that the forecasted benefits are achieved
➤ Properly **DESIGN** the School Street scheme ensuring it is addressing the local challenges
➤ Successfully **ENGAGE** with residents, users, and stakeholders providing feasible solutions
➤ **WARD OFF** the scheme against pre-existing bias and false information/perceptions

What To Look At: 3 Key Areas

Local Behaviors

Understand what type of activities and behaviours are currently happening in the vicinity of the school. The main focus of this assessment is to look at the kerbside and parking activities that are happening in the road within and surrounding the proposed School Street. This will provide valuable information to properly design the scheme.

Traffic Displacement

Understand existing traffic levels around the school and forecast where the potential traffic will be displaced to once the School Street scheme is operational.

- What type of vehicles are currently operating in the area?
- Who owns them?
- Where they will be displaced to?

Performance Monitoring

Continuous monitoring of key measures to understand the effectiveness of the scheme for monitoring and stakeholders engagement purposes:

- Enforcement
- Air Quality
- Mode Share uptake
- Conflicts

Local Behaviors

Understanding how the public realm and kerbside around the school functions is critical to be able to properly design a School Street scheme. As the main focus is to incentivise mode share for pupils and parents, understanding the surrounding environment is critical.

➢ **Traffic Volumes & Speed**

➢ **Analysis of Responses**

➢ **Kerbside & Parking Activities survey**

➢ **Accessibility and Road Safety Assessment**

Kerbside Activity Survey Plans

Legend:
- No Occupancy
- < 3 mins Occupied
- 3-10 mins Occupied
- 10-30 mins Occupied
- > 30 mins Occupied

Legend:
- Access
- Buses Only
- Bus Stop
- Crossing
- Disabled
- Dropped Kerb
- Double Yellow Line
- Keep Clear
- Motor Cycle Bay
- Parallel Bay
- Permit Holder
- Single Yellow Line
- Taxi Bay
- Zig Zag
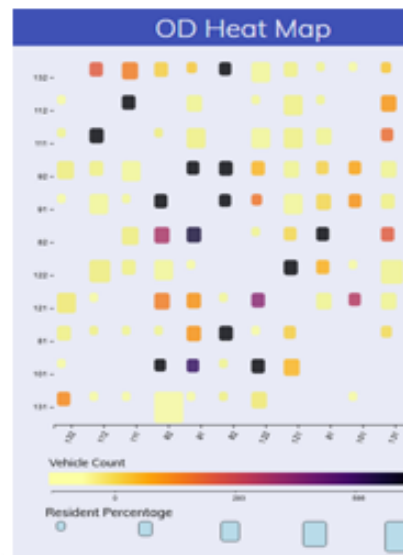- Unrestricted Parking
- ★ Illegally Parked Vehicles

Traffic Displacement

A main point of concern regarding School Street projects is to address the traffic displacement derived by the implementation of the scheme and manage effectively the road closure.
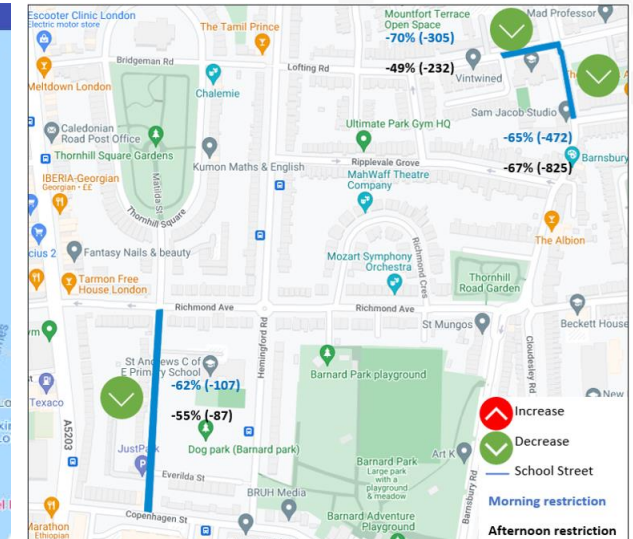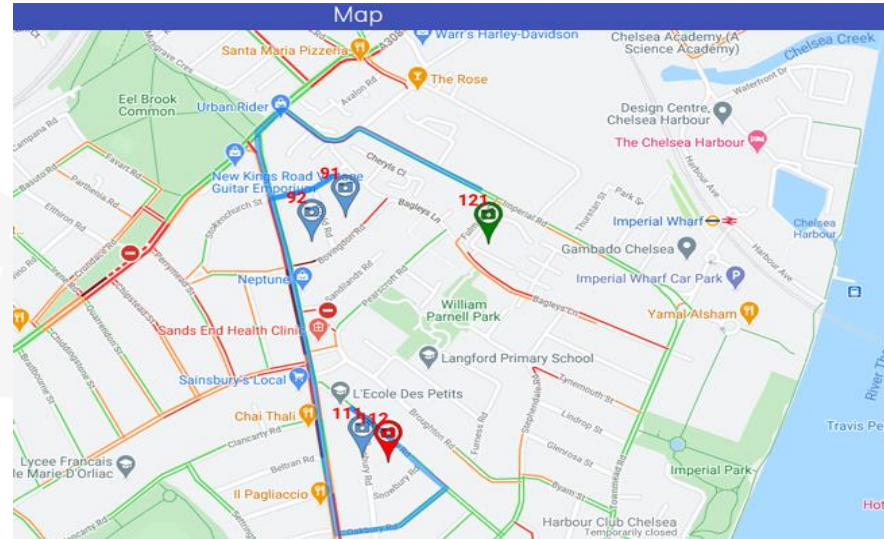
➢ **Origin/Destination Survey**

➢ **Journey Time & Queue Length Assessment**

➢ **VRM Analysis**

Origin/Destination Survey

Performance Monitoring

Constantly monitoring the performance of School Street schemes is important to understand the benefits derived from the scheme in producing a safer and healthier environment for pupils.

➤ **Automatic Counters (VECC)**

➤ **Air Pollution & Noise Readings**

➤ **Video Enforcement**

➤ **Conflicts and Collision Analysis**

Automatic Counters (VECC)
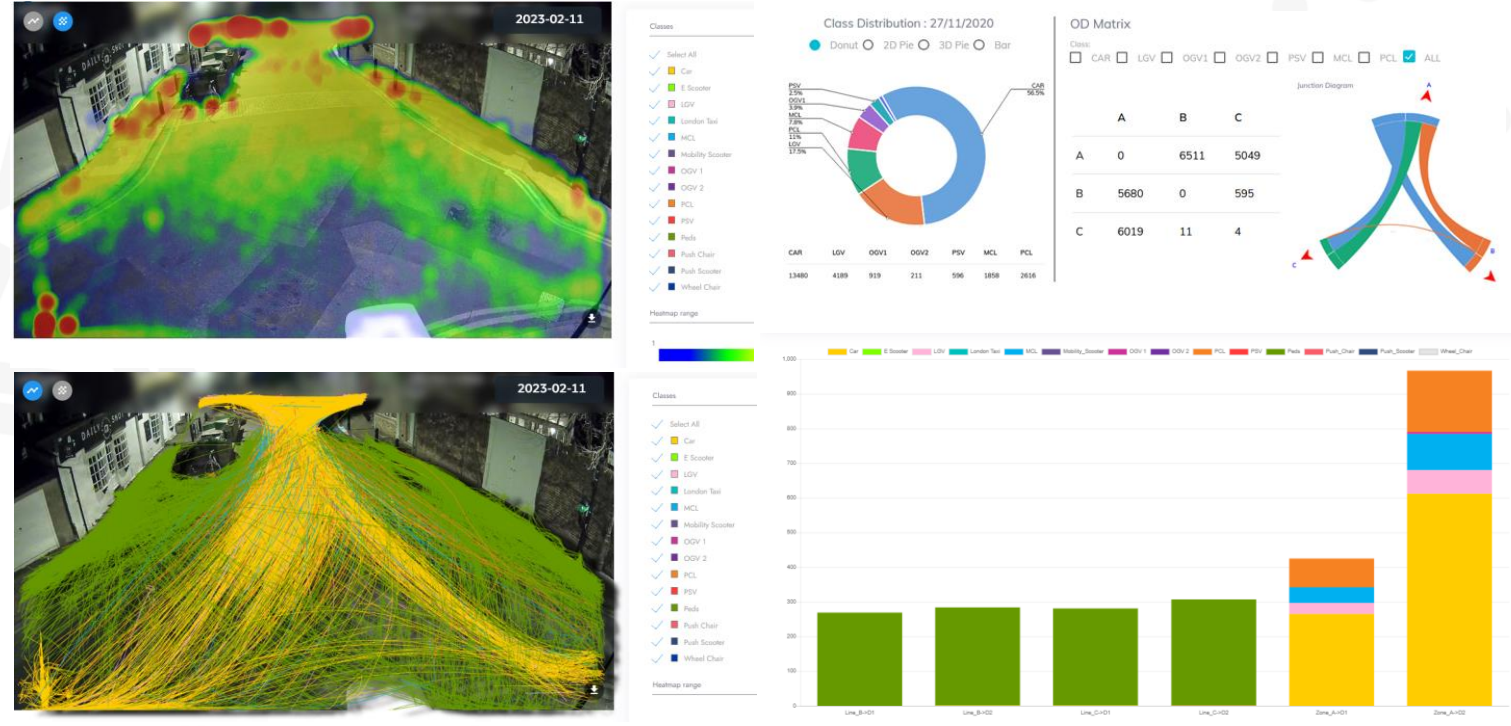
Air Pollution Analysis

Smart Lenz Solution

Hardware

- **Anonymised Live Data:** Edge Processing Smart Lenz VECC Sensor

- **Classification Capabilities:** Uses Ai technology to capture and count multiple road users, from pedestrians through to HGVs.

- **Installed on lamp columns:** The sensor requires power from the grid.

Software

- **Centralized Information:** One-stop shop to access and manage all your transportation datasets.

- **Bespoke Approach:** Dashboard, analytics tools, and reporting functions designed to respond to client requirements.

- **Cutting-Edge Technology:** A software solution to provide a better service and to reduce cost and time requirements.

REAL-TIME Ai PORTAL

Easy Analysis at Your Fingertips

- ➤ **ALL DATA SUPPORTED** From ATC to Parking Occupancy, from ANPR to Manual Classified Counts.

- ➤ **INTERACTIVE & DOWNLOADABLE CHARTS** Perfect to easily visualize and extract data for report creation purposes

- ➤ **TIMESLOT ANALYSIS** Easy to use the slide bar to adjust the time frame of your analysis

- ➤ **NETWORK DIAGRAM** To visually illustrate traffic flows, perfect for engagement with a non-technical audience

- ➤ **MULTI-DAY COMPARISON** Easy way to compare Baseline and Post-Development readings

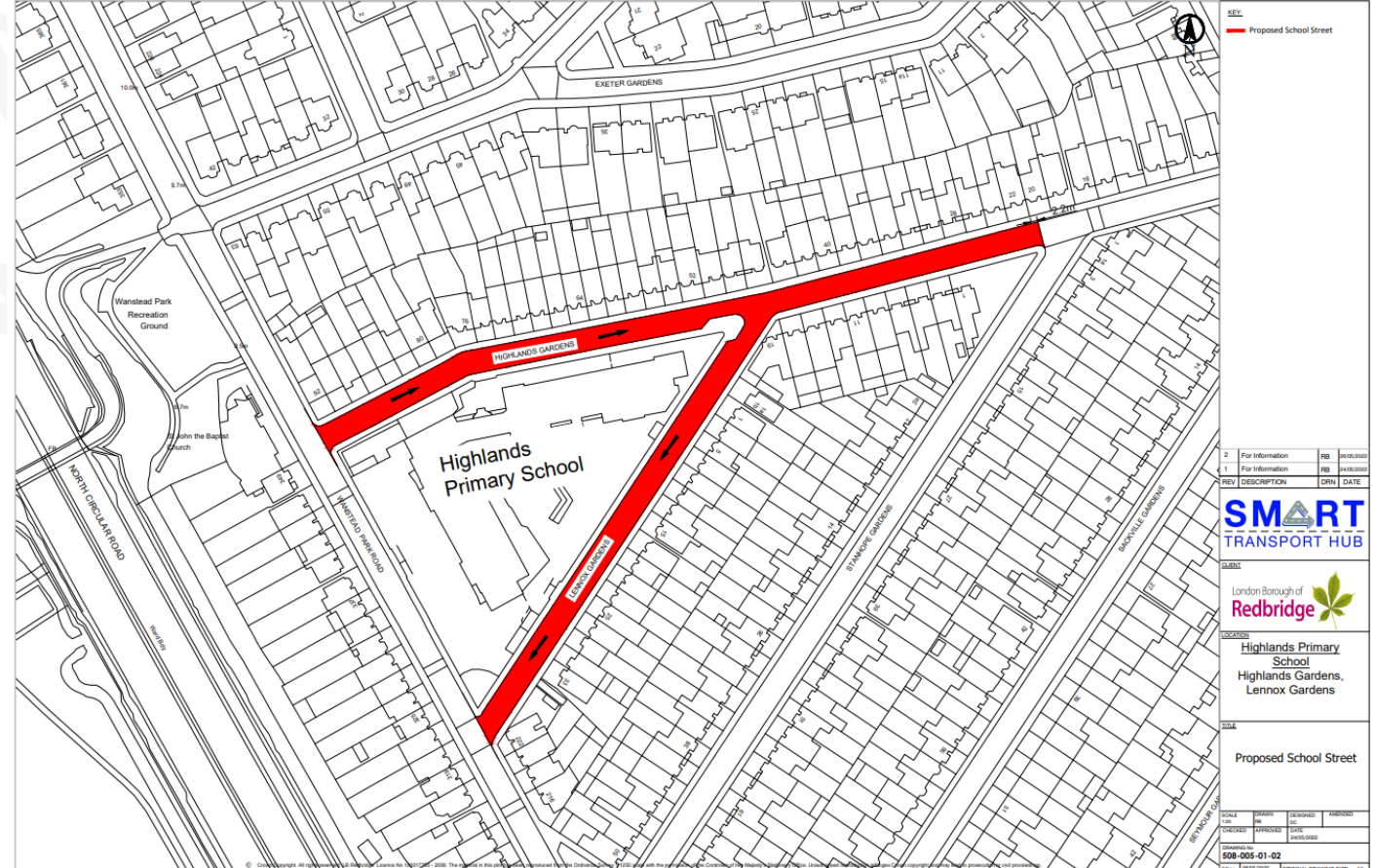- ➤ **SUMMARY & AUTOMATIC REPORTING** Bespoke data outputs to reduce reporting time

Our Services

Smart Transport Hub offers an end-to-end solution to help Local Authorities to implement their School Street schemes.

Our services include:

➢ **Engagement**

➢ **Data Collection and Representation**

➢ **Design**

➢ **Traffic Management Orders (TMOs) writing**

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