Encouraging School Travel Plans in the London Borough of Croydon

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Encouraging School Travel Plans in the London Borough of Croydon

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Abstract

The London Borough of Croydon is experiencing a lack of participation in active school travel, such as walking, biking, and scooting to school. Peter McDonald, the Travel and Transport Planning Officer of Croydon Council, asked for assistance from Worcester Polytechnic Institute's London Project Center in researching barriers to school participation in active school travel, and how Croydon Council can help these schools. We developed findings through interviews, surveys, and observations, and created recommendations for the Council on how to improve participation in active travel programs.

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Acronyms

Acronym	Meaning
ACS	American Community Survey
C of E	Church of England
CAA	Clean Air Act
GVA	Gross Value Added
IOTS	International Obesity Task Force
IQP	Interactive Qualifying Project
KSI	Killed or Seriously Injured
KS2	Key Stage 2
KS4	Key Stage 4
Ofsted	Office for Standards of Education
PHE	Public Health England
RAC Foundation	Royal Automotive Club Foundation
STARS	Sustainable Travel: Active, Responsible, Safe
STP	School Travel Plan
TfL	Transport for London
UK	United Kingdom

Executive Summary

London is the largest city in the United Kingdom (UK) with more than 8.6 million residents in 2015 (BBC, 2015). As the population increases, so does the level of air pollution. Road transport is one of the greatest sources of air pollution in London, and contributes to poor air quality and climate change (Greater London Authority).

According to Public Health England (PHE), an executive agency within the UK Department of Health, a 2014 analysis of current pollutants in London estimates that air pollution shortens average British life expectancy by six months (Cooper, 2014). Additionally, one in 12 deaths that occur in parts of London every year is due to air pollution-related illnesses (Cooper, 2014). Along with increasing sustainability and decreasing pollution, the city of London aims to promote a healthy and more active lifestyle for children through alternative modes of transportation to school. School Travel Plans (STPs) encourage students to use alternative means of travel including walking, cycling, or scooting. Although many schools across London have been using STPs, many struggle to maintain active participation including the London Borough of Croydon.

Peter McDonald, the Travel and Transport Planning Officer of Croydon Council, asked for assistance from Worcester Polytechnic Institute's London Project Center in researching why some schools in Croydon are not as involved in active school travel as others, and how Croydon Council can help these schools.

Methodology

The overall goal of our project was to assist Croydon Council with discovering barriers a school may face when creating and implementing a STP. In order to accomplish this, we developed the following six objectives.

Objective 1: Identify primary and secondary schools with walk-to-school or cycle-to-school programs.

Objective 2: Using the schools identified in Objective 1 and the school sample provided by our sponsor, identify and investigate school characteristics that may influence their success or need for improvement.

Objective 3: Comparatively analyze specific characteristics of engaged and unengaged schools.

Objective 4: Develop recommendations for expanding and increasing participation as well as performance in Croydon STARS programs.

Objective 5: Facilitate education about School Travel Plans and the benefits of participation.

Objective 6: Develop recommendations for a step-by-step guide on how schools in Croydon can develop STPs.

In order to complete the aforementioned objectives, we interviewed eight school staff in the London Boroughs of Brent, Croydon, and Hackney. We gathered data about the 25 schools in Croydon selected by our sponsor using surveys and first-hand observations, collating the results in a comprehensive matrix.

Next, we comparatively analyzed schools' performances in Office for Standards in Education (Ofsted) and their levels of engagement in STPs. We sent an online survey that outlined our matrix to multiple schools. To culminate our fact-finding and analyses, we provided the Croydon Council with recommendations to increase education on and facilitate involvement in active travel. We also shared recommendations with Croydon Council on important components to include in a step-by-step guide to developing a STP.

Findings and Recommendations

Finding: The number and placement of crossings affects the number of students that are involved in walking, cycling, or scooting to school.

In our site visit to Addington High School, we observed that there are no crossings on the road outside the school. Mr. Harding and Mr. Houston, the Deputy Headteacher and Business Manager respectively, both agreed that it is very dangerous on that street, especially during drop-off and pick-up times. Similarly, at New Valley Primary School, the Inclusion Leader, Mrs. Sheena Taylor informed us that there are no crosswalks on the street that the school is on. New Valley Primary School also shares the street with two other schools, and Mrs. Taylor emphasized the importance of lessening the danger of the road by implementing crosswalks. Additionally, during our site visits, we noticed that 17 out of 25 schools did not enough or sufficiently placed crosswalks.

Recommendation: Schools should be notified that the Road Safety Team in the Council solves road safety issues once they appear in School Travel Plans.

Finding: Speaking the schools "language" and active involvement with schools increases open communication between Croydon Council and Croydon Schools.

Establishing communication with the schools is not simple and may take multiple emails and phone calls. According to Ross Butcher, Education and Training Project Manager for Transport for London and in charge of Behaviour Change Programmes, the best way to communicate with schools is to "speak their language." This language asks that, before attempting to pitch ideas to schools, Council members should try to understand what problems each school has and inform the schools on how these issues can be addressed. Furthermore, we found that maintaining a relationship with the schools through active involvement (i.e. consistent contact,

offering programs, and site visits) can change a school's view on how approachable the Council is.

Recommendation: Croydon Council should adopt a more consistent communication strategy.

Finding: Increased cycle-training raises the interest of students in using alternative means of travel.

The ability to bike to school affects the level of student participation in active travel. An analysis of a hands-up survey conducted at 15 schools showed that a larger percentage of students would like to bike to school than currently do, a main factor being training. Results from our online survey agreed with this, as 76% of the 21 respondents running bike-training programs reported high student participation in active travel.

Recommendation: Provide cycling training through third-party organizations.

Finding: Parents cause serious congestion as they violate traffic regulations.

Tracy Porter of Croydon Council's Road Safety Team revealed how parents blatantly violated traffic orders during drop-off and pick-up times, parking on crosswalks and double-yellow lines, which mean no parking. This was not only dangerous for other road users, but also caused serious congestion problems outside the school. Out of 23 online survey respondents, 22 reported traffic congestion problems during drop-off and pick-up times.

Recommendation (1): Place special safety cameras outside schools to keep parents behaviour in check.

Recommendation (2): Children can be used to appeal to parents to stop disruptive behaviours.

Conclusion

Every school is in a unique environment and may not be engaged with active travel for different reasons. The main causes of a lack of school engagement include:

- High focus on school performance (i.e. Ofsted)

- Lack of knowledge regarding Council support

- Teachers' busy schedules

- Transitioning to Independent schools or Academies

- Road safety concerns (pedestrian and cyclist)

- Unreliability of public transport

- Availability of cycle and scooter storage facilities

However, the future is not bleak. There are many ongoing changes that will facilitate the increased participation of Croydon schools in active travel in the future such as the new Ofsted framework. Furthermore, the recommendations we developed based on our findings from investigating Croydon schools will help the Council elicit better engagement from schools regarding School Travel Plans and STARS.

Authorship

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Objective 3	Kevin Farr	All
Objective 4	Kevin Farr	All
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1 Introduction

London is the largest city in the United Kingdom (UK) with more than 8.6 million residents in 2015 (BBC, 2015). As the population increases, so does the level of air pollution. Road transport is one of the greatest sources of air pollution in London, contributing to poor air quality and climate change. Every day, 34 million vehicles populate the streets of London, 28 million of which are personal vehicles (EPUK, 2015). Road congestion in particular causes many air quality issues due to the density of nitrogen oxides, particulate matter, carbon monoxide and hydrocarbons released into the atmosphere (EPUK, 2015). Levels of these pollutants have become a concern for both officials and citizens alike.

According to Public Health England (PHE), an executive agency within the UK Department of Health, a 2014 analysis of current pollutants in London estimates that air pollution shortens average British life expectancy by six months (Independent, 2014). Additionally, one in 12 deaths occur in parts of London every year due to air pollution-related illnesses. The PHE report also found that pollutants contribute to 29,000 deaths in the UK every year. Most of the time these pollutants are not the single cause of death, but rather are a contributing factor to underlying health problems, including cardiovascular and respiratory illnesses (Independent, 2014). In order to decrease air pollution related issues, UK organizations and government agencies are creating programs and implementing laws to increase walking and cycling.

One such effort is the London Congestion Charge, which was started by Transport for London (TfL), Greater London's governing transport authority (Congestion Charge-TfL, 2015), in February 2003. TfL established "Congestion Charge Zones" to lower the amount of vehicles on the road (Congestion Charge-TfL, 2015). Between 07:00 and 18:00 Monday to Friday, travelers

must pay a daily fee of £11 to drive within the charging zone (Congestion Charge-TfL, 2015). The charge has resulted in a reduction in traffic volumes, and has provided revenue which has been invested in transport infrastructure improvements and walking and cycling schemes (Congestion Charge-TfL, 2015). Policies like this alone will not secure a sustainable future; they must be complemented by education on alternative travel and environmentally friendly behaviors.

Along with increasing sustainability and decreasing pollution, the city of London aims to promote a healthy and more active lifestyle for children through alternative modes of transportation to school through programs such as "Zero Heroes". This program was implemented in 2012 at the Norbury Manor Primary School in Croydon, a borough of London. It encouraged students to walk, cycle, or scoot to school on a designated day in order to create a "bubble" of clean air around the school (Zero Heroes United; June 19, 2013). A similar initiative, "The Big Pedal" program, was developed by the non-profit organization, Sustrans. This program holds a competition between schools to see which have the most students, parents, and teachers biking to school instead of driving or using public transportation (Bike It- Sustrans, 2015).

"Zero Heroes" and "The Big Pedal" are examples of initiatives that make up a School Travel Plan (STP). STPs encourage students to use alternative means of travel including walking, cycling, or scooting which schools can then record in an online accreditation program known as *Sustainable Travel: Active, Responsible, Safe* (STARS). STARS is present in schools from nursery to college to promote safer, more sustainable methods of transportation. Through STARS, schools can record current travel-related activity, and set goals such as reducing car use and increasing road safety. Although many schools across London have been using STPs, many struggle to maintain active participation. For example, the London Borough of Croydon that has over 160 schools, however, only half of the schools currently are engaged in STARS, and only half of those

schools (40) are actively participating (McDonald, 2015). Peter McDonald, the Travel and Transport Planning Officer of Croydon Council, asked for assistance from Worcester Polytechnic Institute in researching why some schools in Croydon are not as involved in active school travel as others, and how Croydon Council can help these schools.

The main focus of this project was to assist Croydon Council with the research on barriers a school may face when creating and implementing an STP. Croydon expects schools to create a completed and updated STP every three years, however, many schools choose not to participate.

Croydon Council wanted us to visit schools and learn about the lack of participation and performance in developing STP initiatives. By looking at the extent to which they promote these initiatives, the Council hopes to encourage schools to begin to record the walk- and bike-to-school programs in the STARS online accreditation scheme. Our project goal is to assist Croydon Council with discovering barriers a school may face when creating and implementing a STP.

This report has five chapters. In Chapter 2 we provide information on topics ranging from basic London travel to specific School Travel Plans in Croydon. In Chapter 3 we introduce our methodology, elaborating on each step we took to achieve our project goal. In Chapter 4 we present our findings on school travel in Croydon. Finally, in Chapter 5 we offer our recommendations and conclusions.

2 Background

London is the most populous city in Western Europe and serves as the capital for finance and government in the United Kingdom (TouristMaker, 2015). As a result, the city has major traffic concerns, specifically with congestion[1], which leads to air pollution and road safety concerns. Traffic congestion is a particular concern around schools, where the safety of students is at risk not only due to the potential increase in accidents, but also to health problems from air pollution. In response to the pollution and safety issues of high traffic congestion, many schools throughout Greater London have begun implementing School Travel Plans. School Travel Plans (STPs), are programs that encourage students to use active travel - walking, cycling, or scooting - for their commute to and from school.

In Section 2.1, we explore travel in London and how it is influenced by demographics. In Section 2.2, we discuss the problems associated with traffic congestion, mainly air pollution and road safety. We then investigate the benefits of active travel to school on physical health in Section 2.3, and explore additional benefits to mental health as well as air quality. Next, we consider the role government plays in active travel, primarily through its policies in Section 2.4. We finish with a look at School Travel Plans in Section 2.5 and conclude with the main objective of this project in Section 2.6.

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[1] "Congestion is defined as an 'excess' travel rate (minutes per kilometer) compared to that which would be expected under uncongested conditions" (Transport for London, 2011)

2.1 Travel in London

Travel in London mainly occurs either by public or private transport, with a few people choosing to walk or cycle. Public transport consists of the Tube (underground rail), Overground rail and buses. Demographic data offers insight into the general travel behavior in London.

2.1.1 Public vs Private Transport

Private car use was the primary means of travel until 2000, when Transport for London was established through The Greater London Authority Act of 1999 (Greater London Authority, 1999). Since then, Transport for London has made major improvements in the public transport system, leading to a fall in car use and a surge in reliance on the public transport system. As illustrated by Figure 2.1, this continuing trend resulted in the use of public transport for daily trips exceeding those made by private cars in 2013. This increased use of public transportation was supported by the 2008 refurbishing of London's Overground rail when it served 33 million passengers, to serving 120 million passengers in 2013 (Underground, overground; Transport in London, 2013).
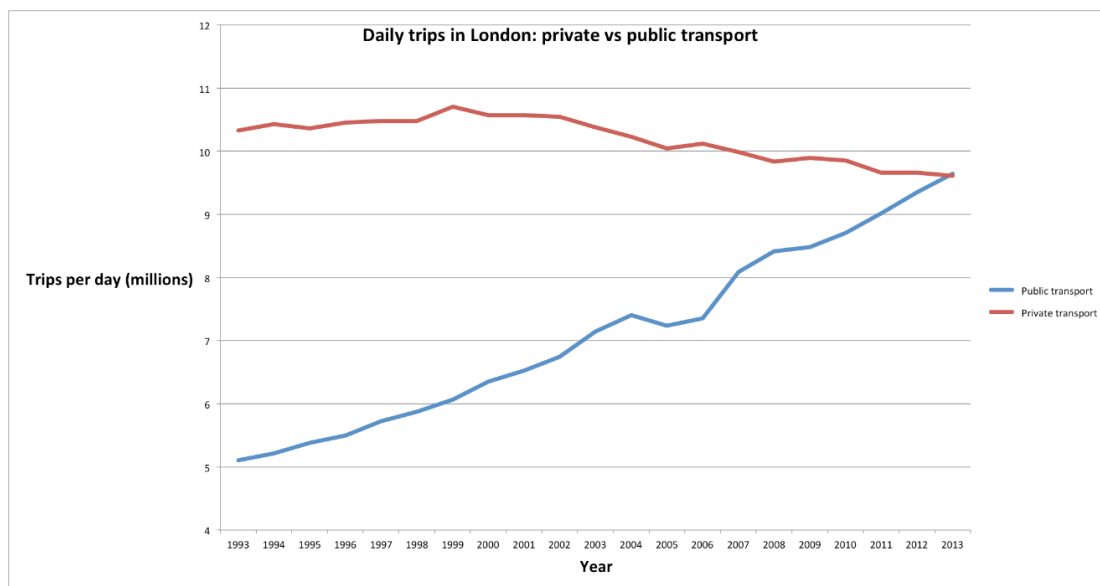
Figure 2.1 (Transport for London, 2014)

2.1.2 Demographics and Travel in London

Demographics, specifically population and household income, can influence the way Londoners travel around the city. The following sections discuss the effects of population size on travel behavior, followed by a look at the relationship between income and travel in London. This is done in the context of the inner and outer London boroughs, a map of which is shown in Figure 2.2.

Figure 2.2 Map of London showing inner and outer boroughs (Geocases)

Effects of Population

The population of London has gone through many changes over the last half century. During the Second World War, London Docklands, one of the world's major ports at the time, suffered serious damages as a result of the German air strikes (Bell, 2008). Furthermore, during the 1960s the shipping industry adopted larger cargo ships as a result of containerization, which the docks could not accommodate (Ham & Rijsenbrij, 2012). As a result, by the 1980s all factories and docks had migrated to deep-water ports such as those in Tilbury and Felixstowe, leaving their former home derelict (Ham & Rijsenbrij, 2012). As shown in Figure 2.3, London's population

reached a minimum of just under seven million residents by the mid-1980s, but has since

recovered, with the number of residents surpassing the population before the decline by 2012.
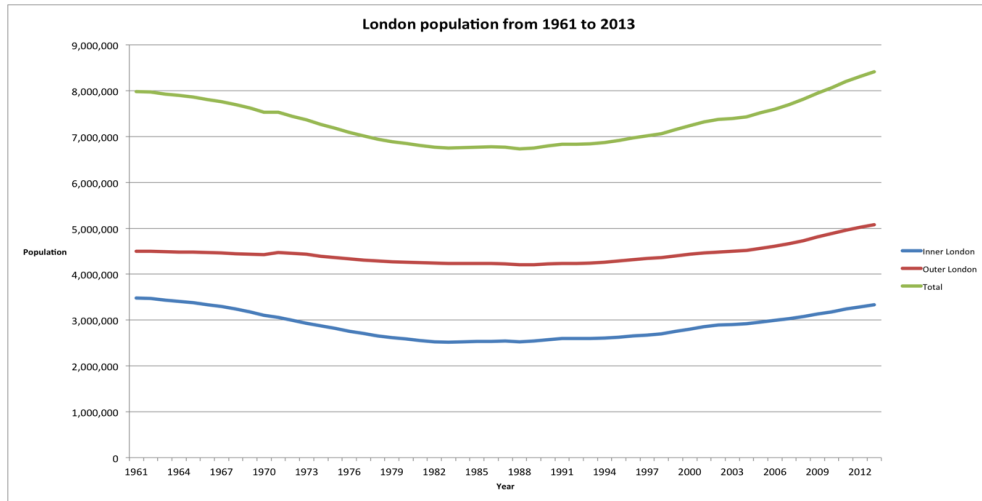
Figure 2.3: London population from 1961 to 2013

The resurgence in population in the late 1980s was due to the restoration of the Docklands

into a more attractive commercial and residential area, as well as higher birth rates in the capital.

As the population increased, the number of people traveling around the city also rose, shown in

Figure 2.4.
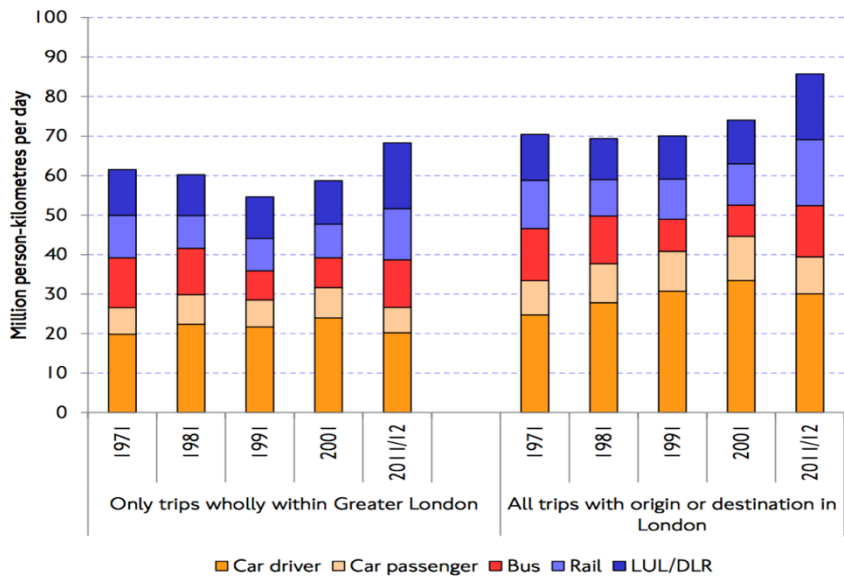
Figure 2.4: Weekday volume of travel by London residents for motorized travel
(Transport for London, 2013)

Effects of Income

In their paper, Joyce Dargay, Professor Emeritus of Econometrics[2] at University of Leeds, and Dermot Gately, Professor Emeritus of Economics at New York University, found that as household income increases, so does car and vehicle ownership (Dargay & Gately, 1999). The 2011 London Travel Demand Survey showed that households without a car made fewer trips compared to those that had one or more cars, as illustrated in Figure 2.5 (London Travel Demand Survey, 2011).
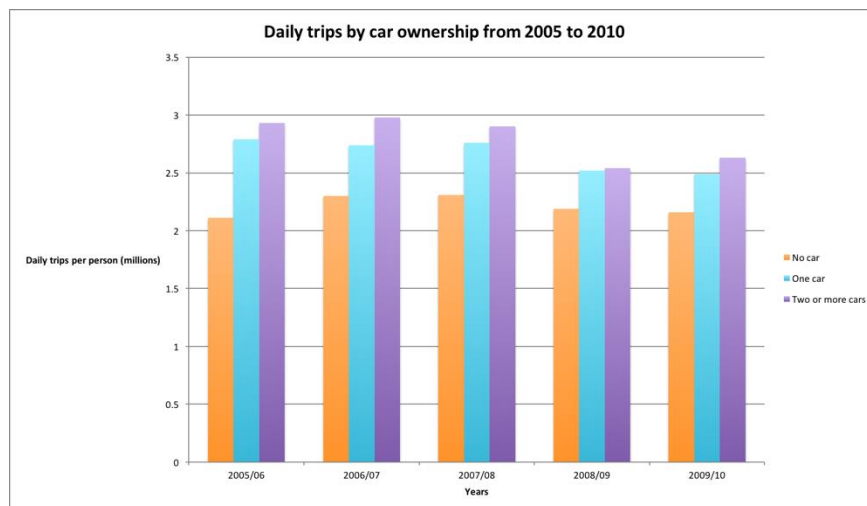
Figure 2.5 Daily trips by car ownership from 2005 to 2010

The Global Recession of 2008 had ramifications on the UK economy (Imbs, 2010). However, the impacts differed between the inner and outer London boroughs. From 1997 to 2007, outer London productivity grew by 70 percent while output the inner boroughs increased by more than 100 percent (Transport for London, 2013). After 2007, even though productivity in inner London grew at a much slower pace than before the recession, the outer boroughs saw a mere three percent growth, shown in Figure 2.5 (Transport for London, 2013).

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[2] Econometrics is the application of mathematical and scientific methods to economic data to find any relationships
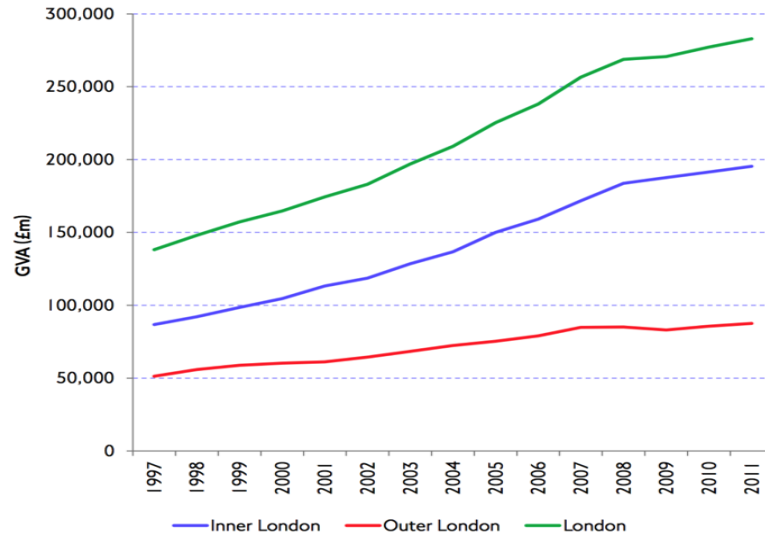
Figure 2.6 Productivity of the outer and inner London Boroughs from 1997 to 2011

As illustrated by Figure 2.7, estimates for the average annual household income from the London Datastore shows that residents of the outer boroughs make significantly less than those in the inner London boroughs.
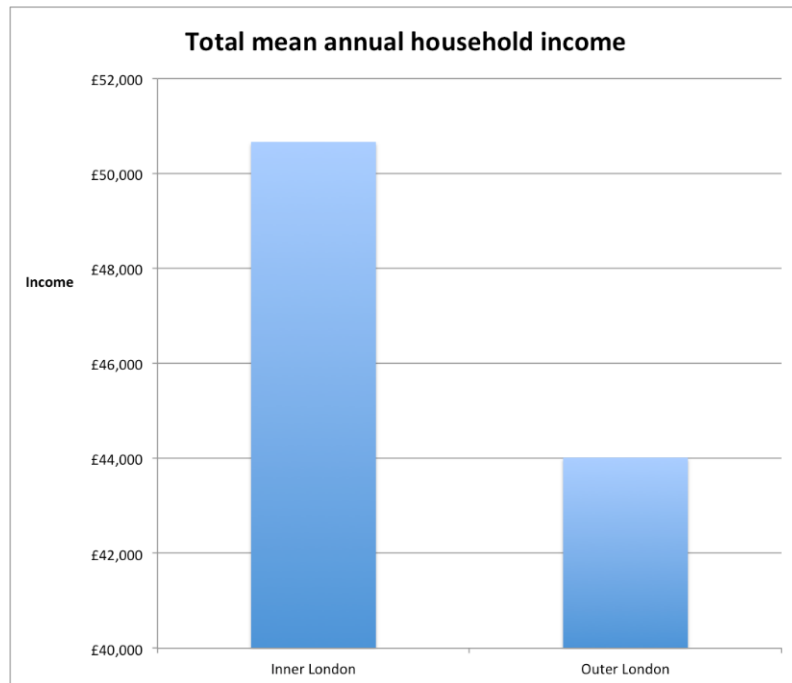
Figure 2.7 Total mean annual household income

2.2 Traffic Congestion Issues

Boris Johnson, the present Mayor of London, has suggested car-free Sundays in parts of the city following a report by the Royal Automobile Club (RAC) Foundation, a transport research charity. The report, published in 2014, forecasted an extra seven million drivers on London roads within two decades (Green, 2014). This raises concerns about the effects of vehicle congestion such as air pollution and road safety.

2.2.1 Air Pollution

Air pollution accounted for 3.7 million premature deaths in 2012, more than AIDS and malaria combined in the same year (World Health Organization, 2014). Exposure to pollutants exacerbates respiratory illnesses, and increases mortality from cardiovascular diseases (Seaton, Godden, MacNee, & Donaldson, 1995). An increase in traffic congestion raises the hazard of air pollution as more exhaust fumes are produced. Carbon dioxide, although not harmful to physical health, is one of the primary causes of the "greenhouse effect," trapping sunlight in the atmosphere resulting in increased temperatures (Houton & Callandar, 1992). In addition to the release of greenhouse gasses, vehicle emissions produce nitrogen dioxide, ozone, particulate matter, carbon monoxide and sulfur dioxide (Brunekreef & Holgate, 2002).

Nitrogen dioxide is produced as a result of burning fuels in cars, or from a reaction between nitrogen and oxygen. It causes coughs and shortness of breath, and a higher chance of respiratory infections upon prolonged exposure (Kampa & Castanas, 2008). Ozone, which has similar health effects, is formed when nitrogen oxides react with sunlight and hydrocarbons (Phalen & Phalen, 2013).

Toxicity levels of particulate matter depend on how many toxic metals make up their composition. The particle size of particulate matter determines how deep into the respiratory tract

these particles are deposited. There are two main size ranges defined: $PM_{2.5}$ and PM_{10}, for diameter smaller than 2.5 μm and 10 μm respectively (Phalen & Phalen, 2013). Both particulate matter and sulfur dioxide have adverse effects on the respiratory system, and can aggravate asthmatic conditions.

Stop-start driving, which occurs at a higher rate in congested areas, further increases vehicle pollutant emissions. Hence, in order to effectively reduce air pollution for cars, traffic congestion must be mitigated by cutting the number of drivers on the road. In addition to air pollution issues, traffic congestion is also a source of road safety problems.

2.2.2 Road Safety

Traffic congestion also raises road safety concerns for the city of London. The results of an econometric experiment on the impact of congestion on road safety conducted on England's M25 highway established a linear relationship between congestion and traffic accidents (Wang, 2010). However, Transport for London has been putting measures in place to increase road safety in the city.

In London, the number of road accidents leading to death or serious injury has steadily gone down during the nine-year period from 2005 to 2014. According to London's Department for Transport, the annual average number of people killed or seriously injured from 2005 to 2009 was 30,041, while the average from October 2013 to September 2014 was 24,360 (Department for Transport, 2014).

Current London mayor Boris Johnson aims to greatly improve road safety, and has provided an action plan, Safe Streets for London (Transport for London, 2013). This agenda outlines changes aimed at appreciably reducing casualties on London roads.

Part of the Mayor's plan was to design new types of crossings to increase pedestrian safety. Puffin (**P**edestrian **U**ser-**F**riendly **IN**telligent) crossings, shown in Figure 2.8, use signals on the pedestrian side to prevent confusion from flashing signals on the other side of the road, as could be the case with 'Pelican' crossings, pictured in Figure 2.8. They were also intended to aid people with visual impairments cross the road (Webster, 2006).

Figure 2.8 Puffin Crossing (left) vs. Pelican Crossing (right)

Safety cameras are special cameras usually installed on highways, which capture an image of any vehicle breaking traffic regulations. These offenders are then sent fines for the violation. Safety cameras have proved to be very effective in reducing casualties, with KSIs[3] falling by 50 percent on roads on which they were introduced (Transport for London, 2013). As such, the mayor plans to replace the old wet film with new digital safety cameras, which can measure speeds over a distance, as well as introducing it to more areas (Id).

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[3] Killed or Seriously Injured (KSI) is a standard measurement of transport and road safety

2.3 Active Travel and Student Health

Active travel refers to the focus on physical activity such as walking and cycling in transport (Panter, Jones, & Sluijs, 2008). It delivers benefits on a personal level due to increased physical activity, and community health as a result of a reduction in the reliance on motorized transport. Consequently, in 2010 the Department of Health presented a strategy for public health in England with active travel as one its focus areas, highlighting the positive effects active travel would have on reducing obesity and improving environmental quality (HM Government, 2010).

2.3.1 Obesity in Children

Obesity[4] refers to an excess of body fat, usually relating to an increased weight-for-height. It is measured using the Body Mass Index (BMI), which is defined as weight in kilograms divided by the square of height in meters (kg/m^2) (Lifestyles Statistics Team, 2014). Table 2.8 shows the different ranges used to define BMI status. Obesity negatively impacts individual health in numerous ways, causing chronic diseases which can lead to early death (Cavill & Rutter, 2013).

Health and Social Care Information Center is a national information and data analytics agency sponsored by the Department of Health. Their statistics show that there has been an increase in the prevalence of obesity in English children aged 2-15 since 1995 where 11% of boys

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[4] For this paper, obesity includes overweight BMI status

and 12% of girls were obese, peaking at 19% for both sexes in 2005 (Lifestyles Statistics Team, 2014).

Definition (BMI status)	BMI range (kg/m2)
Underweight	Under 18.5
Normal	18.5 to less than 25
Overweight	25 to less than 30
Obese	30 to less than 40
Obese I	30 to less than 35
Obese II	35 to less than 40
Morbidly obese	40 and over
Overweight including obese	25 and over
Obese including morbidly obese	30 and over

Figure 2.9: BMI ranges used to define BMI status (Cavill & Rutter, 2013)

Obesity and physical activity

Partaking in physical activity is a critical step in the prevention of obesity and other related illnesses such as diabetes and cardiovascular disease (Flynn, et al., 2006). Walking, cycling or scooting to and from school ensures that students include physical activity in their daily routine. A comparison of data from the Department of Transport in four European countries and the International Obesity Task Force (IOTS) displayed in Figure 2.10 shows that cycling can directly influence the levels of obesity in children (Sustrans, 2008). In the 2007 American Community Survey (ACS[5]), 47 out of the largest 50 cities in the United States reported that higher rates of walking and cycling to work were associated with lower percentages of adults with obesity or diabetes (Pucher, Buehler, Bassett, & Dannenberg, 2010).

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[5] The ACS is a study that reports year-round travel data for cities and states in America
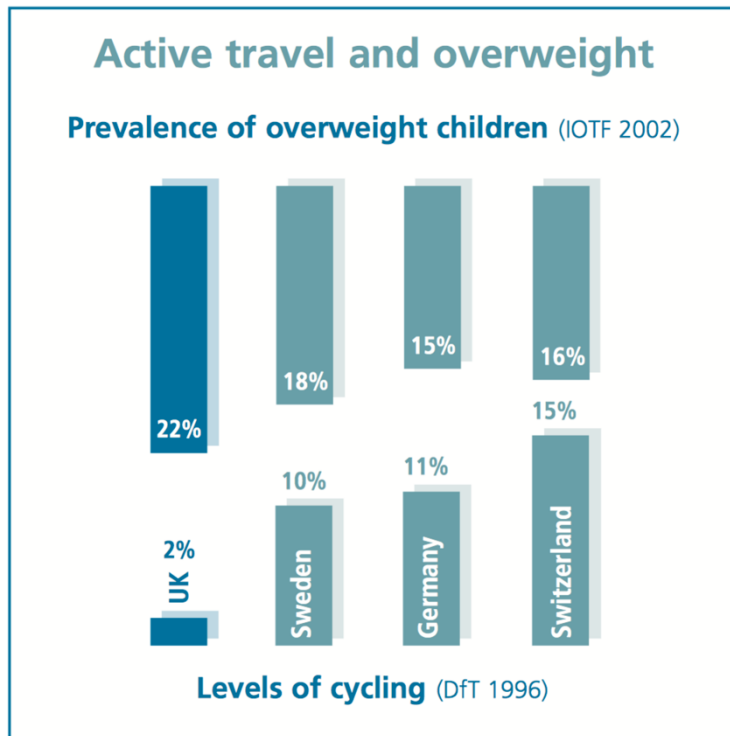
Figure 2.11 Relating cycling and the prevalence of obesity (Sustrans 2008)

Obesity and income

A 2012 report by Health Survey for England revealed significant variations in obesity in children aged 2-15 according to their equivalised[6] household income (Lifestyles Statistics Team, 2014). It can be seen in Figure 2.11 below that boys in the lowest income quintile were more likely to be obese, whereas this was true for the lowest three quintiles for girls. Figure 2.7 showed that the outer London boroughs have a considerably lower household income than the inner boroughs, with a large number falling in the bottom two quintiles. Consequently, from the previous data, the prevalence of obesity is likely to be higher in the outer boroughs than the inner city boroughs.

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[6] Equivalisation refers to adjusting household income for size and composition, for comparative reasons
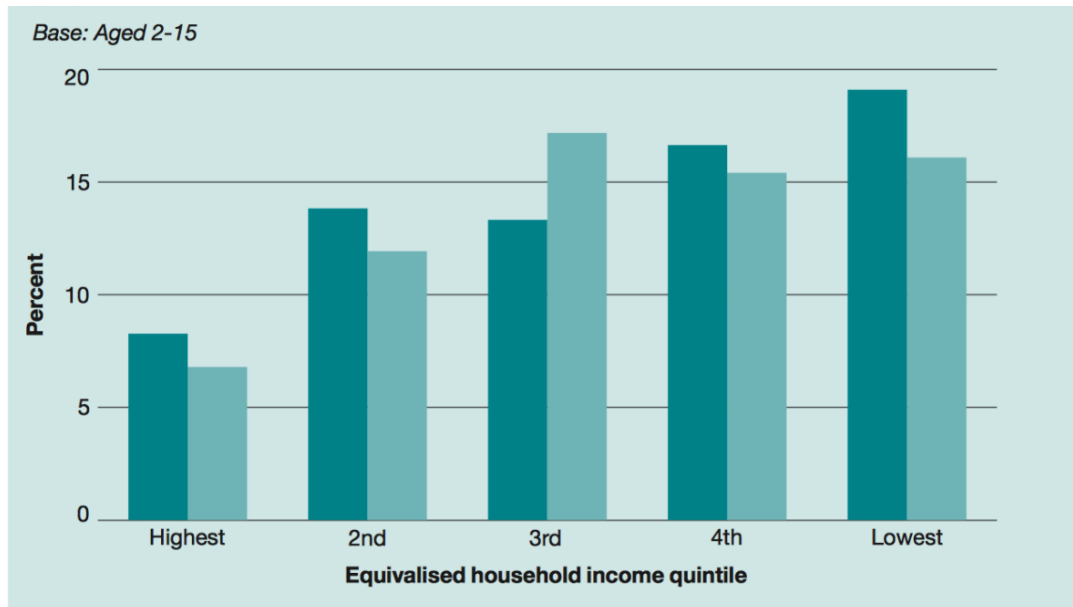
Figure 2.12 Prevalence of obesity, by equivalised household income and sex (boys, darker bars)

2.3.2 Clean Air, Clear Lungs

Vehicle emissions have debilitating effects on the respiratory system, and are especially harmful to alveoli, which are responsible for gas exchange of oxygen and carbon dioxide (Whitsett & Weaver, 2015). The effects of air pollution are especially alarming in children.

A 2011 study involving school children in East London revealed that the lung capacity of eight and nine year olds is five percent lower than the national average, with seven percent of the children having a lung function at a level internationally regarded as hazardous (City of London Air Quality Strategy, 2011). Thus, having an STP will help make children healthier by increasing physical activity, as well as reducing air pollution as the number of cars on the roads decreases.

2.3.3 Mental Health Benefits

Physical activity has been shown to have positive effects on the mental health of children, helping improve learning and memory. According to a study done by the Department of Exercise Science at the University of Georgia, it takes about 20 minutes of exercise to increase information processing and memory functions, which students can achieve by walking, biking or scooting to

school (Wilcox, 2015). A survey done as a part of "Mass Experiment 2012" found that out of 20,000 Danish children, those who cycled or walked to school performed measurably better on tasks demanding concentration, with the effects lasting for up to four hours after the participants got to school (Goodyear, 2013).

In addition to cognitive ability, active school travel also improves the environment and physical health of children by reducing air pollution. The government has a key role to play in promoting active travel to school.

2.4 Government Role in Active Travel

In the winter of 1952, a combination of adverse weather conditions and excessive burning of coal for heat caused a thick layer of smoke to form over the city of London. This was called the Great Smog of 1952, and caused over 4,000 deaths (The Great Smog of 1952, 2015). Since the Great Smog of 1952, the UK government and, later, Greater London Authority, have put in place policies aimed at alleviating congestion problems within the city, specifically related to air quality and student health. The Clean Air Act of 1956 is one such policy. More recently, in an effort to further decrease air pollution, Transport for London implemented the London Congestion Charge Scheme. We explore these policies and the role of School Travel Plans in improving student health in the following sections.

2.4.1 Clean Air Act (CAA)

The Clean Air Act of 1956 was the UK Parliament's first response to the Great Smog of 1952, and sought to mitigate air pollution in the city by introducing smoke control areas where only smokeless fuels could be burned, and encouraging Londoners to switch from coal based fuels to less harmful sources (Office for National Statistics, 2014). The 1956 CAA was further amended in 1968 and 1993. The current air quality policy falls under the 2010 to 2015 policy on environmental quality. Numbers show, however, that these measures have not been as effective in reducing ozone pollution as they have with PM_{10} pollution. Figure 2.12 depicts the annual levels of PM_{10} and Ozone in the UK from 1987 to 2014. Since this has not led to significant reduction of air pollutants such as CO_2 and NO_2, the city of London has implemented alternative means to improve air quality.
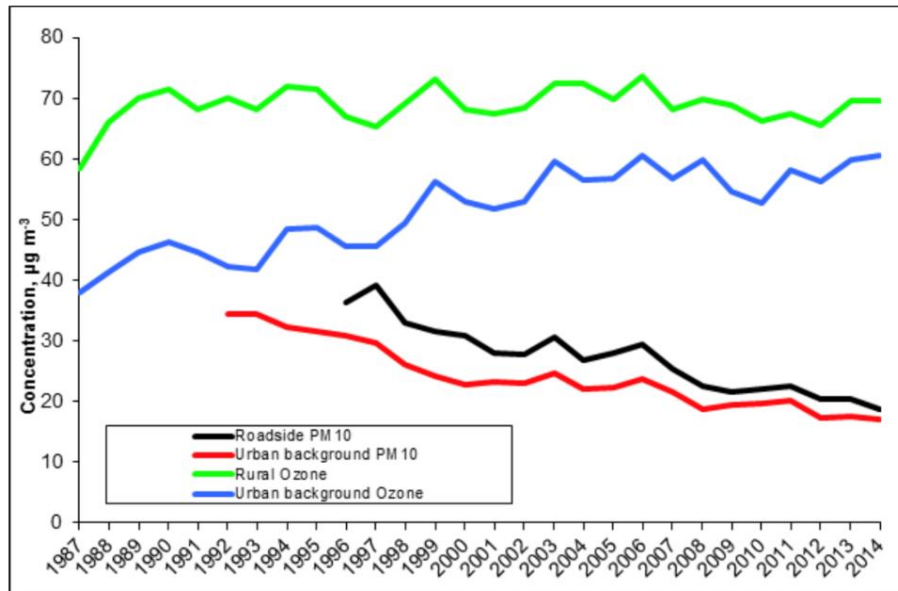
Figure 2.13 Annual Levels of PM10 and Ozone in the UK, 1987 to 2014
(Office for National Statistics, 2014)

2.4.2 The London Congestion Charge

The Greater London Authority Act of 1999 also created the position of an elected mayor. Ken Livingstone won the election in 2000 and some of his top transport priorities were to reduce congestion as well as travel time for car users. The London Congestion Charge was introduced in February 2003 to meet these objectives (Transport for London, 2005). Implemented by Transport for London, this is a punitive fee for all four-wheeled vehicles using the Congestion Zone during the charging period (Monday to Friday, 7:00 – 18:00).

Within a year, traffic inflows fell by 18% and congestion in the zones was reduced by 30%, effectively meeting its targets, but also helping reduce emissions with a noticeable fall in pollutant concentrations in the control zone (Atkinson R. W., et al., 2009). The scheme has also played a key role in increasing cycling in Central London, resulting in an 80% rise since 2000 (Sustrans, 2008). Reducing the number of cars while regulating the number of vehicles is a more effective approach to reducing pollutant emissions. School Travel Plans are, therefore, an important step in the improvement of air quality in the city of London.

2.4.3 School Travel Plans

School Travel Plans (STPs) are documents, which detail ways students get to and from school using active travel methods. Although not a statutory requirement, Transport for London and the Borough Councils recognize the benefits of active travel to students' health and encourage schools to have STPs. A 2013 study conducted by the Department of Transport shows that only 42% of 2,350 English children age 5-16 walk to and from school (Department for Transport, 2013). In order to bolster these numbers, schools use initiatives such as Walk on Wednesday and The Big Pedal among others, recording them in a new online accreditation scheme called Sustainable Travel: Active, Responsible, Safe (STARS).

Walk on Wednesday

Living Streets, a national charity for pedestrians, started Walk on Wednesday (WoW) in 2004. This initiative, which has since evolved to Walk Once a Week, is designed to reduce traffic congestion around schools and improve the health and fitness of the students by encouraging walking to school at least once a week (WoW, 2013). Children record their walk to school on wall charts or postcards, awarding students who achieve the minimum of four monthly walks with footprint-shaped badges (WoW, 2013). As of 2009, there were 1,895 primary and secondary schools in England participating in WoW (WoW, 2013). In our first interview with Peter McDonald, the Travel and Transport Planning Officer of the Croydon Council, he noted that even though WoW is a popular program, it has been quite expensive, costing about £500-£1000 annually per school. This high price for purchasing the badges can deter many schools that are already on tight budgets from getting involved in the program (McDonald, 2015). Transport for London provides funds for participating schools to subsidize Walk on Wednesday costs.

The Big Pedal Project

The Big Pedal Project is the UK's largest inter-school cycling and scooting competition. This program is run by Sustrans, a leading UK charity enabling people to travel by foot, bicycle or public transport. The Bike Hub, a cycling initiative in the UK, also provides support for The Big Pedal. The goal of the contest is to inspire students to bike or scoot by engaging them in a competition to find out which school will have the most students ride bicycles or scooters to school over the course of a month. In 2014, over £500,000 worth of CO_2 (1000 tons) and fuel (85,000 gallons) was saved as 1,142,374 journeys were made (The Big Pedal, 2015). The number of participants continues to grow, with 1.4 million journeys made by bike or scooter in 2015 (The Big Pedal, 2015).

The Big Pedal Project is a good example of a successful initiative since it not only raises awareness, but also has high participation rates. According to a 2014 survey conducted by The Big Pedal, 96% of participants said it increased the levels of cycling and scooting to their school, and 76% said that they continued to cycle and scoot to school after the month-long event (The Big Pedal, 2015). Special, themed Big Pedal events encourage even more participation. Consequently, The Big Pedal hosts an annual "Super Heroes Day" during which participants dress like their favorite superheroes. In 2014, Sustrans raised more than £13,000 through The Big Pedal, which went towards planning more active travel initiatives.

Sustainable Travel: Active, Responsible, Safe (STARS)

STARS was introduced in 2007 by Transport for London to facilitate the implementation of STPs (TfL Celebrates, 2014). Each school records any initiatives in their STPs and those with outstanding records are awarded Bronze, Silver or Gold STARS accreditation, in increasing order of achievement. The accreditation criteria can be found in Appendix A.

Transport for London decided to pioneer a system to make it easier for STPs to be implemented due to their success at getting children involved in active travel. For example, Tawhid Boys School in the London Borough of Hackney managed to drop the percentage of students travelling by car from 31% to 14% after developing an STP in 2005 (Hackney, 2015). Citywide, the adoption of STPs in 54% of London schools led to the reduction of car use for school travel by almost seven percent in a year (Greater London Authority, 2008).

As of 2015, there are 695 schools using STARS throughout London, with only 146 of them achieving Silver and 38 of them achieving Gold STARS accreditation (Hackney, 2015). A yearlong London-wide report shows that schools that are STARS accredited have great results in promoting active travel, with an average 12.4% of students changing their mode of travel from the

conventional car (Hackney, 2015). The London Borough of Hackney provides a good model for promoting sustainable methods for getting to school.

A particularly outstanding school, Tyssen Community Primary School, received the London 'School of the Year' award from Transport for London for its efforts in sustainability. In order to further expand the use of STPs, the Borough of Hackney holds an annual Sustainable Travel and Schools Conference, where School Champions attend half-day workshops which focus on best practices for keeping an STP active (Hackney, 2015). The London of Borough of Croydon, is committed to increasing participation in active travel within all 160 schools.

2.5 STARS in Croydon

Located in the southern part of London, the London Borough of Croydon is the fifth largest borough and is home to a population of 330,587 (Borough, 2015). There are 160 schools in Croydon, 80 of which are currently engaged with STARS (McDonald, 2015). Croydon Council is looking at ways to improve implementation of STPs and STARS within its schools.

2.5.1 Obstacles to implementing STARS in Croydon

There are a few reasons why some Croydon schools in particular might be less inclined to implement STARS. Lack of adequate infrastructure, geographical limitations and crime concerns contribute to a lack of participation in STARS (McDonald, 2015).

One of the main obstacles in the push to increase sustainable travel use is a lack of suitable infrastructure such as safe sidewalks and cycling lanes. Many consider cycling as dangerous and have a legitimate fear of sharing the road with other vehicles. The UK Department for Transport reported in 2007 that 47 percent of adults 'strongly agree "that the idea of cycling on busy roads frightens me"' (Horton, Cox, & Rosen, 2007). In addition to this, Croydon has areas with hills,

which create unfavorable conditions for walking or biking and can deter students from using active travel to school.

Walking or biking to school can also be influenced by the prevalence of crime. The Metropolitan Police reports that Croydon had the third highest number of offenses related to violence against the person in the financial year 2014/15 (Metropolitan Police, 2015). At about 4.5 percent of London's total number of crime, these offenses include murder and assault. Furthermore, Croydon also had the highest amount of rape, accounting for six percent of rape charges in London (Id). This may be why many parents choose to drive their children to school to protect them from these dangers.

2.6 Conclusion

Our objective in undertaking this project was to assist the London Borough of Croydon in understanding any impediments to the implementation of STARS in Croydon schools, and provide recommendations on how to overcome them. We worked under the leadership of Peter McDonald, the Travel and Transport Planning Officer of Croydon Council, and Lewis Campbell, his apprentice, to achieve our goal. We describe our methodological approach to tackling this project in the next chapter.

3 Methodology

3.1 Introduction

Our project sponsor, Peter McDonald, the Travel and Transport Planning Officer of Croydon Council, wanted us to investigate why schools struggle to implement or sustain School Travel Plans (STPs) (Peter McDonald, 2015). Mr. McDonald wanted us to gather data on Croydon STPs and identify any similar characteristics between schools that are not very engaged in walking or biking to school. Consequently, the overall goal of our project was to assist Croydon Council with discovering barriers a school may face when creating and implementing a STP.

3.2 Objectives

In order to accomplish the project goal, we developed six objectives. The objectives are divided into two phases. The first phase consists of the data collection and the second contains analysis and presentation of the data. In order to accomplish the following six objectives, we utilized research methods including surveys and interviews. Prior to any data collection in our project, we fully informed participants what the project purpose was, and what we intended to do with the information. We acquired verbal or written consent from all participants. The surveys also included instructions on how to access our completed project report.

Phase 1
Objective 1: Identify primary and secondary schools with walk-to-school or cycle-to-school programs.
Objective 2: Using the schools identified in Objective 1 and the school sample provided by our sponsor, identify and investigate school characteristics that may influence their success or need for improvement.

Phase 2
Objective 3: Comparatively analyze specific characteristics distinguishing engaged and unengaged schools.
Objective 4: Develop recommendations for expanding and increasing participation as well as performance in Croydon STARS programs.
Objective 5: Facilitate education about development of School Travel Plans and the benefits of participation in active school travel programs.
Objective 6: Develop recommendations for a step-by-step guide on how schools in Croydon can develop STPs.

We discuss the specific methods we used to accomplish each objective in more detail below.

Objective 1: Identify primary and secondary schools with walk to school or cycle to school programs.

In order to gain an understanding of School Travel Plans, we interviewed a leader of a school travel program in the United States, conducted online research of schools in London boroughs that have high STP participation, and reviewed a list of Croydon schools provided to us by Mr. McDonald and his apprentice Lewis Campbell.

For this objective, we conducted online research for successful STPs via the STARS website (stars.tfl.gov.uk). Using their search tool, we found schools that have had high participation in many school travel initiatives in the past year, and from there, created a list of schools to visit in the London boroughs of Hackney and Brent. These are '*Outstanding*' achievers in STARS and the information that we gathered from them served as a model for comparison with schools that are struggling with School Travel Plans. We looked at the road safety, school environment, community involvement with the school, and Ofsted performance.

Mr. McDonald, and Mr. Campbell, provided us with a list of 25 schools they wanted us to visit within the London Borough of Croydon. A map of these schools can be seen in Figure 3.1. Mr. McDonald chose these schools based on their levels of engagement with active school travel. The list contained contact information and basic details about each school but did not include any

information on the schools level of engagement or participation in STPs. Mr. McDonald and Mr. Campbell intentionally left out any previous knowledge they had about each school's level of engagement in STPs so we could visit each school without any bias, which could potentially compromise our findings.

1	Addington High School
2	Al Khair Primary School
3	Archbishop Tenison's C of E High School
4	Broadmead Primary
5	Castle Hill Academy
6	Coulsdon C of E Primary School
7	Cumnor House School for Boys
8	Elmwood Infant School
9	Harris Academy Purley
10	Keston Primary School
11	New Life Christian School
12	New Valley Primary School
13	Norbury Manor Business & Enterprise College for Girls
14	Parish Church C of E Nursery & Infant School
15	Parish Church C of E Junior School
16	Park Hill Junior School
17	Riddlesdown Collegiate
18	Rockmount Primary School
19	St. Andrew's C of E High School
20	St. John's C of E Primary School
21	St. Mary's RC High School
22	St. Thomas Becket Catholic Primary School
23	Trinity School of John Whitgift
24	Winterbourne Junior Girls' School
25	Winterbourne Nursery & Infant School

Figure 3.1: Map of 25 Croydon schools provided by Mr. McDonald

Objective 2: Using the schools identified in Objective 1 and the school sample provided by our sponsor, identify and investigate school characteristics that may influence their success or need for improvement.

In order to complete this objective, we contacted and interviewed schools and school staff in the London Boroughs of Brent, Croydon, and Hackney. The information that we gathered helped

us assess what characteristics contributed to the schools success or challenges with active travel programs. For the purposes of this project, we defined successful schools as schools with STARS accreditation. First, we contacted schools in the London Boroughs of Hackney and Brent via email and held interviews with School Travel Champions from the following schools: Grazebrook Primary School, Tyssen Community School, and Brentfield School. The interview questions can be found in Appendix B. During these interviews, we inquired about the success the Champions have had in running STPs, what made them so successful, and how they overcame any obstacles along the way. These interviews served as a comparison for schools with low student participation in STPs.

We contacted the 25 schools in Croydon via email. We briefly explained who we are, what our project was, and why we were contacting them. If the schools did not respond within three days, we called them and spoke to the secretary and the Headteacher (if he/she was not busy). If we had difficulty contacting the schools again, we called and emailed the School Travel Champion (if the school had one). If the school did not have a School Travel Champion, we called the school office and Headteacher again.

We gathered data about the 25 schools in Croydon, collating the results in a matrix, which can be seen in Figure 3.1. We created a Microsoft Excel Spreadsheet with a matrix for the schools that we filled out upon our visits. The matrix has three major categories: STPs, Road Safety, and School and Community. Each sub-category could yield a point value of 0 or 1 (i.e. Road Safety: Sufficient Sidewalks: 0 = no, 1 = yes; Road Safety: Road Width: 0 = narrow, 1 = wide). This method was used in order to make it easier to compare the schools to one another. Once we acquired all of the data, we compared the results for the 25 Croydon schools.

Another means of data collection we used was document review. We analyzed the results of the "hands-up" surveys. These surveys conducted by schools based on questions provided by TfL. These surveys were used to gather information on the students' views of school travel.

We carried out site visits at all 25 of the Croydon schools in order to obtain first-hand observation data about the road safety, environment, and access to public transportation around each school. We tried to assess each part of the matrix on these visits.

Lastly, since it was a busy time of the year for schools, we found online surveys to be more effective in initiating communication with the schools (Please see Appendix C for our survey questions). This survey contained questions about active travel and the factors that influence engagement with School Travel Plans. The surveys also included aspects of the matrix that could only be provided by school staff. If we were unable to identify some aspects of the matrix through our site visit, these surveys served as a means of obtaining the rest of the data for each school.

What we are evaluating	(How we are evaluating)
STP	
Updated STP (< 3 years)	0 = no, 1 = yes
Healthy Schools Member	0 = no, 1 = yes
Number of Initiatives	(#)
Presence of WOW	0 = no, 1 = yes
Presence of Sustrans	0 = no, 1 = yes
Pressure on Storage	0 = low, 1 = high
Bike Training Program	0 = no, 1 = yes
Park and Stride	0 = no, 1 = yes
Inclusion in Curriculum	0 = no, 1 = yes
Interact with Council?	0 = no, 1 = yes
Community Involvement	0 = no, 1 = yes
School Champion/Dedicated Member of Staff	0 = no, 1 = yes
Student Involvement	0 = low, 1 = high
Effective Incentives	0 = no, 1 = yes

Road Safety	
Morning Congestion	0 = no, 1 = yes
Frequent Accidents	0 = no, 1 = yes
Road Width	0 = narrow, 1 = wide
Sufficient Crosswalks	0 = no, 1 = yes
Enough Crossing Guards	0 = no, 1 = yes
Adequate Sidewalks	0 = no, 1 = yes
Close to Busy Road	0 = no, 1 = yes
Junior Road Safety Officer	0 = no, 1 = yes
Convenient Public Transport	0 = no, 1 = yes
Appropriate Traffic Orders	0 = no, 1 = yes
School & Community	
Opening Times	
Crime Concerns	0 = no, 1 = yes
Sufficient Parent Involvement	0 = no, 1 = yes
Sufficient Staff Involvement	0 = no, 1 = yes
Effective Faculty Incentives	0 = no, 1 = yes
Low income parents	0 = no, 1 = yes
General Notes	
Crosswalk Conditions	
Public Transport Concerns	
Travel Safety Concerns	
Sidewalk Conditions	
School Champion Comments	appointed/volunteered, level of commitment
Details on Facilities	bike storage, etc
Spent Capital Funding	Describe how school spent funding

Figure 3.2: School Matrix

Phase 2

Objective 3: Comparatively analyze specific characteristics within engaged and unengaged schools.

After gathering data from Objective 2, we comparatively analyzed schools' performances in STPs and Ofsted and their levels of engagement with the Council. We analyzed the data from our matrix (seen in Table 3.1). From there, we identified any trends, commonalities, and differences in the data. We used schools performing well in STPs in Hackney and Brent from Objective 2 as a control model for our comparisons, bearing in mind topics including disparities in location, school size and availability of resources such as sidewalks and cycle paths.

The information from the matrix was compiled into a side-by-side analysis in order to assess performance differences in schools.

Objective 4: Develop recommendations for expanding and increasing participation as well as the performance in Croydon STARS programs.

To achieve this objective, we used our findings (Chapter 4) to give feedback to Croydon Council as well as the schools and communities analyzed during our study. In order to do this, we gave a presentation highlighting the changes that should be incorporated into the various school systems.

We also presented our analysis of the schools to Croydon Council. In this presentation we included any challenges the schools face in creating an active STP. Additionally, we presented a detailed plan on how to fill those gaps, whether through further funding, installment of new initiatives, or restructuring the school's School Travel Plan entirely.

Objective 5: Facilitate education about development of School Travel Plans and the benefits of participation in active school travel programs.

To culminate our fact-finding and analyses, we contemplated the most effective way of increasing development of and participation in School Travel Plans. We visited a Croydon school

that had a theatre production about road safety. After the performance, we distributed a paper

survey to determine how effective theatre performances are on influencing road safety, which can

be found in Appendix C. Considering our target audience of younger children particularly between

the ages of 5-12 we contacted a local theatre group suggested by Lewis Campbell. We recommend

these assemblies in order to get the students involved and have a fun, interactive approach that

inspires the students to think more about active travel.

Objective 6: Develop recommendations for a step-by-step guide on how schools in Croydon can develop STPs.

For our last objective, we identified important components of a step-by-step guide for

Croydon schools on how to develop STPs. The guide contains information on establishing a School

Travel Champion, evaluating road safety, creating initiatives, and further developing and

maintaining a STP in the future. All the information contained within the guide is designed to help

schools interact and gain support from Croydon Council and help them find Croydon specific

resources for developing a STP.

3.3 Data Collection Obstacles

In this project, we were as diligent in our fact-finding procedures as possible to generate

accurate data, however, given our time constraints and teachers' busy schedules, we were not

always able to gather all of the necessary data.

Obstacle 1: Electronic surveys have a lower response rate than paper surveys.

Studies on survey response rates between electronic and paper surveys show that despite a

higher response rate with paper surveys (75% vs 67%), electronic surveys are typically faster (9.6

vs 10.8 days) (Schuldt & Totten, 1994). We chose to distribute online surveys in order to make it

more flexible for the school representatives to take since we were completing our project during a busy time of the year for schools.

Obstacle 2: School availability

An issue for overall data collection was the timing, mainly due to schools having exams and half-term during the first three weeks of our project. Schools were less interested in participating since they had more pressing things in front of them at the time. Since schools were preoccupied, the number that got back to us is not representative of all 160 Croydon schools.

Obstacle 3: Sample size

Given that there are 160 schools in Croydon but we were able to gather information from not more than 25, this might not be completely representative. However, we are confident that our research makes useful contributions to help Croydon Council understand school involvement in STPs.

Through these six objectives, we worked to accomplish our overall goal of assessing and expanding the level of school participation in the STARS program in the borough of Croydon. In the next chapter we discuss our analyses of our findings.

4 Findings

In order to collect data, we visited 27 schools in the London Boroughs of Croydon, Brent and Hackney, interviewing 13 members of staff. We also held meetings with nine members of Croydon and Hackney Councils, and Transport for London employees. In addition, we sent out two online surveys to schools requesting information about School Travel Plans and Ofsted, and received 26 and 13 responses respectively. Finally, we reviewed documents on past School Travel Plans from the STARS website, as well as Ofsted reports from the Ofsted Inspection Database. In Section 4.1, we explain the effects that the school environment has on active travel and section 4.2 discusses the governmental impact on school travel.

4.1 School Environment

The internal and external surroundings of a school influence students' level of involvement in active travel initiatives. This section presents an analysis of the information we found on how different school environments affect active school travel.

Finding 1: When public transport is easily accessible, the amount of alternative travel increases.

Two factors in particular influence the number of students who use active travel: the placement of public transport stops and the reliability of public transport. According to Mr. David Harding and Mr. Ron Houston, the Deputy Headteacher and Business Manager respectively of Addington High School in Croydon, the closest bus stop to the school is in a convenient place for students to travel to and from school. Unfortunately, Transport for London (TfL) has proposed that the number 130 bus be re-routed, causing the closest bus stop to the school to become a 15-minute

walk away as opposed to the current five-minute walk. Mr. Harding and Mr. Houston predicted that this re-routing would result in more students being driven to school.

Secondly, as stated by Mrs. Sheena Taylor, the Inclusion Leader at New Valley Primary School in Croydon, the public bus system is not reliable. She elaborated by explaining how the buses are not always on time and cause confusion among the students. We had first-hand experience with the unreliability of the buses. However, in our online survey, all 21 responses to "How reliable are bus, tram, or train services to your school?" were 'Moderate,' 'High' or 'Very High.'

According to hands up surveys provided by STARS (Sustainable Travel: Active Responsible Safe), many students use the public transit system, but a majority would rather use other forms of transport. Figure 4.1 depicts the percentage of students from specific schools that currently use the bus system in Croydon compared to the percentage of students who would like
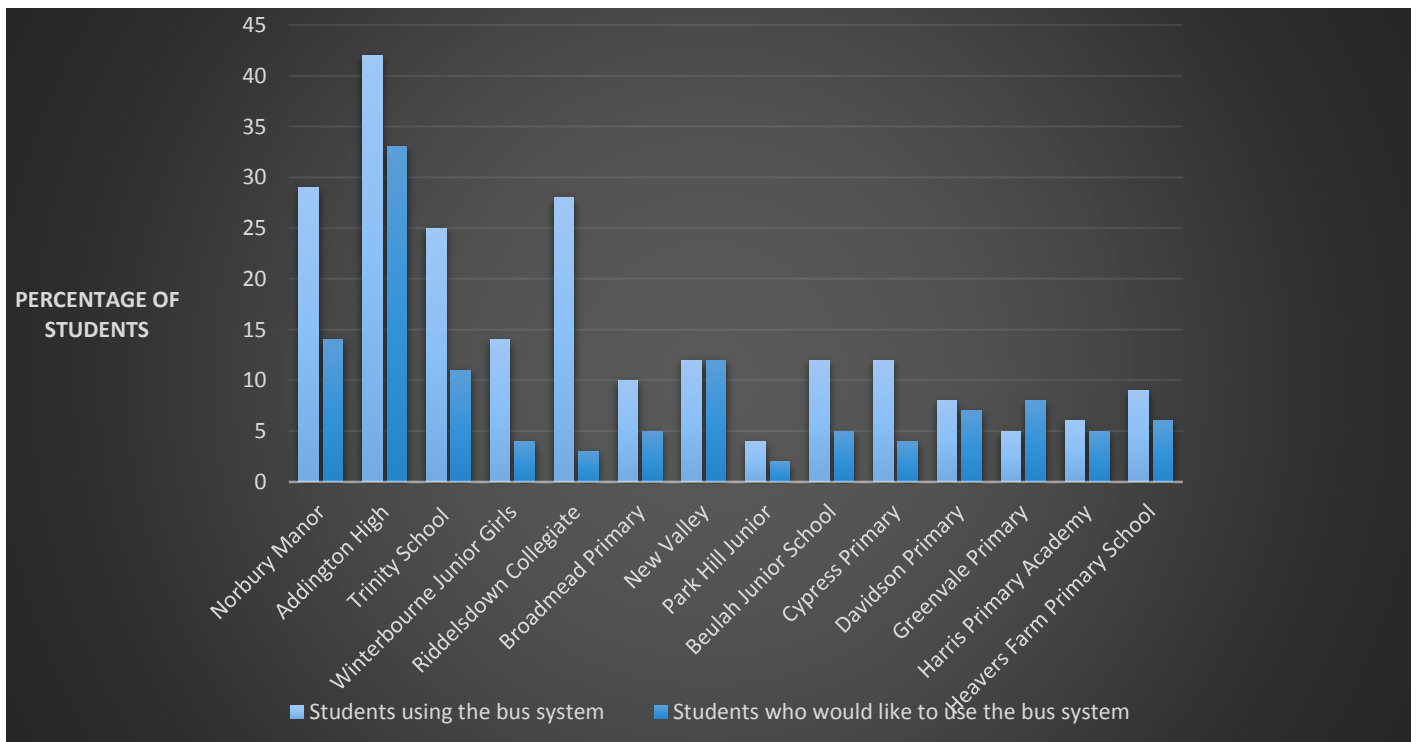
Figure 4.1 Students who currently use the bus vs students who would like to use the bus

to use the bus system in Croydon. We got this data from the Sustainable Travel: Active, Responsible, Safe (STARS) hands-up surveys. These surveys were given to schools throughout London.

Finding 2: The number and accessibility of parking spaces around the schools influences road safety in the school community.

In our interview with Ms. Tracy Porter and Mr. Clive Whittle, members of the Road Safety Team in Croydon Council, they explained that the largest road safety issues around schools in Croydon result of inconsiderate parking. This includes parking on crosswalks, on double-yellow lines[7], and in front of neighbors' driveways. As we observed from the 25 schools we visited, 20 out of 25 schools display signs restricting parking on the perimeter. However, due to the fact there are no traffic orders to enforce this, parents decide to park regardless. This convenience parking by busy parents during drop-off and pick-up times is extremely dangerous to pedestrians and cyclists.

Insufficient parking spaces also cause road safety concerns and community issues when congestion occurs. On our site visit to Parish Church Junior School, we observed that there is no organized parking scheme, and that the school staff all park in one area in front of the school. There were very few defined parking spots, and some cars were blocked into the lot by six or more other cars. Out of 23 online survey respondents, 22 reported traffic congestion issues during drop-off and pick-up times. Ms. Porter noted, however, that parents changed their behavior and conformed to the rules whenever a traffic officer was present.

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[7] Double-yellow lines on the sides of roads indicate "No Parking" zones

Finding 3: The presence of cycle and scooter storage influences student participation in active travel.

In many schools that promote active travel, there are designated areas for storing students' bicycles or scooters during the school day. These are either a shed with locks, or a rack to which students could fasten their equipment. These storage areas provide protection for bicycles from rain, and more importantly from theft. As such, when schools have limited bike/scooter storage it may be a disincentive for students to cycle or scoot to school. Schools such as Brentfield Primary School in Brent and Beulah Infant School in Croydon have cycle and scooter storage present. Both schools have a majority of students using active travel.

In contrast, Addington High School and New Valley Primary School do not have cycle storage and correspondingly do not have many students using active travel. At Addington High School, only three out of 640 students cycle to school.

Finding 4: The number and placement of crossings affects the number of students that are involved in walking, cycling, or scooting to school.

In our site visit at Addington High School, we observed that there are no crossings on the road outside the school. The street is narrow since many cars park along the sides of the road, making visibility difficult (see Figure 4.2 for a picture of the street). Mr. Harding and Mr. Houston both agreed that it is very dangerous on that street, especially during drop-off and pick-up times. The school is in a corner of Croydon, and a majority of the students have to cross this narrow road in order to travel after school. Similarly, at New Valley Primary School, Mrs. Taylor informed us that there are no crosswalks on the street that the school is on. New Valley Primary School also shares the street with two other schools, and Mrs. Taylor emphasized the importance of lessening the danger of the road by implementing crosswalks. Furthermore, during our site visits, we noticed

that 17 out of 25 schools did not have sufficient crosswalks, meaning either the placement or existence were not favorable.

Figure 4.2: Fairchildes Avenue, the narrow street that Addington High School is located on

When we spoke to Mr. Clive Whittle, a Senior Engineer of the Road Safety Team in Croydon Council, he explained the difficulties of moving and creating crosswalks. The engineers of the Road Safety Team research and calculate the most efficient, safe, and cost-effective

placement for a crosswalk. We also interviewed Ms. Sue Ritchie, a Senior Engineer in Croydon

Council, who supported Mr. Whittle's claims about the work that is put into creating a crosswalk.

Finding 5: Increased cycle-training and road safety training raises the interest in students using alternative means of travel.

The ability to bike to school plays a substantial role in the levels of student participation in

active travel. An analysis of the hands-up STARS survey conducted at 15 schools showed that a

larger percentage of students would like to bike to school than currently do (Figure 4.3). This

shows that students face some barriers from biking to school, one of which we believe is a lack of

cycling training. Our online survey corroborated our thoughts, as 76% of the 21 schools that run

bike training programs reported high levels of student participation in active travel initiatives.
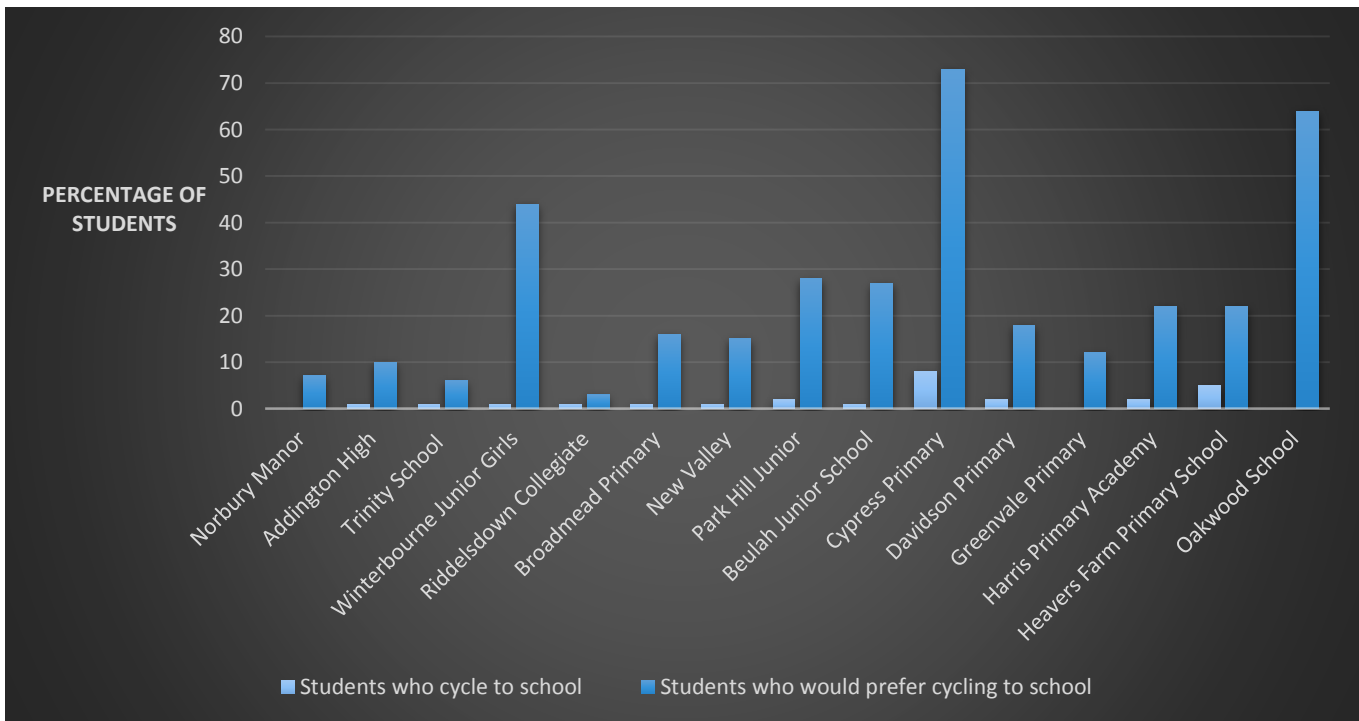
Figure 4.3 Students who currently cycle to school vs students who would like to cycle to school

Finding 6: There is a lack of designated bike lanes and provisions for cyclists on the roads.

Cyclists are at great risk on the road, and need special precautions such as cycling lanes to make them feel safe. During our site visits to schools, we noticed very few designated bike lanes. The bike lanes we did see all fell below the TfL recommended size of 2.0m. As a result, students who choose to cycle to school would have to face the hazards of sharing lanes with motorized traffic. This is very off-putting for parents who would rather not expose their children to such perils, and for students who may be afraid of cycling so close to motor vehicles. Rob Sambrooks of Hackney Council corroborated this information, noting that cycling to school was greatly limited by road safety concerns.

Finding 7: Student participation in active travel is irrespective of the crime in the area.

We initially thought that the prevalence of crime would affect how much students walked or biked to school, however our data did not verify this. Mr. Houston and Mr. Harding of Addington High School expressed that they were located in an area that had issues with crime. As such, they noticed that very few students cycled to school fearing their bikes being stolen, since there was no secure storage for them. However, the data from our online survey showed that every school that reported crime as an issue also had high student involvement in active travel.

Finding 8: There are insufficient warning signs at some schools.

Ms. Sheena Taylor of New Valley Primary School also shared that a lack of appropriate traffic signs or markings raised safety concerns for their students. On a road leading to their school, there are no 'School Warning' signs leading to drivers speeding along the road. Furthermore, 70%

of our 23 survey respondents acknowledged that they required additional signage to keep the children safe.

4.2 Government

In this section we focus on the local authority, Croydon Council and certain government policies that can be improved to boost engagement in School Travel Plans (STPs). We explored communication between Croydon Council and schools, communication within the Council, and tapping into Ofsted.

Finding 9: Speaking the schools "language" and active involvement with schools increases open communication between Croydon Council and Croydon Schools.

Establishing communication with the schools is not a simple task and may take multiple emails and phone calls. According to Ross Butcher, the Education and Training Project Manager for Transport for London and the leader of Behaviour Change Programmes, the best way to communicate with schools is to "speak their language." This language asks that, before attempting to pitch ideas to schools, Council members should try to understand what problems each school has and inform the schools on how these issues can be addressed. In addition, while participating in a workshop at Pan London presented by Mr. Bob Perry, member of Chiswick Partnership, titled "Turn 'no' to 'yes,'" we learned that by finding the underlying reasoning for why schools are unable to participate in active travel, you are more likely to convince them to say "yes." By identifying specific issues, whether it be road safety or funding, the Council can find ways of encouraging participation without fully presenting entire initiatives to them.

Furthermore, we found that maintaining a relationship through active involvement (i.e. consistent contact, offering programs, and on site visits) can change a school's view on the support from the Council and would be more open to communication.

Finding 10: The presence of a person dedicated to active travel within a Borough Council increases the success of active travel programs within schools.

According to Ms. Beverly Dickinson, the Active Travel Coordinator for Grazebrook and Shacklewell Primary Schools in the London Borough of Hackney, having a member of the Hackney Council like Mr. Robert Sambrooks, Alternative Travel Director for Hackney, increases active travel participation. The Hackney Council Alternative Travel Director helps schools coordinate initiatives and assist schools with STARS accreditation and establishes a reliable point of contact within the Council for schools. In 2015, Lewis Campbell will be moving into the position of managing School Travel Plans. According to Mr. McDonald and Mr. Campbell, schools have begun to reengage in School Travel Plans and we believe this is attributed to Mr. Campbell's commitment to active school travel.

Finding 11: Intra-Council collaboration encourages active travel.

According to Mr. Robert Sambrooks, Hackney Alternative Transportation Director, communication between members of the Hackney Council has contributed to the successful student participation in School Travel Plans. Tracy Porter, member of the Croydon Road Safety Team, explained that communication in the past with schools has been affected by the Transportation Team and the Road Safety Team attempting to both make contact with similar schools. This competition for schools' attention is unproductive and some teams are left unable to address specific issues or communicate important information, because schools may believe the Council contact to be redundant. Mr. Campbell has made progress in integrating the network of communication.

Next, we found that many schools that have issues maintain participation in School Travel Plans spend most of their time on improving their Ofsted inspections. Office for Standards in Education (Ofsted) is a national inspection agency that assesses schools serving children ages 3-19, on criteria such as: quality of leadership and management, achievements, and behavior and safety. Figure 4.4 establishes the ranking system of Ofsted. In this next section, we analyze the relationship between STPs and Ofsted.

Ofsted Rating	Meaning
1	Outstanding
2	Good
3	Requires Improvement
4	Inadequate

Figure 4.4 Respective Ofsted Ratings Source: David Butler

Findings 12: Schools that have Ofsted ratings below 'Good' are uninterested in developing strong(er) active travel programs.

According to Ms. Beverly Dickinson, Alternative Travel Coordinator for the Shacklewell and Grazebrook Primary Schools in Hackney, School Travel Plans are not a priority compared to achievements in the classroom. Mr. Robert Sambrooks lamented that many schools that are having issues with Ofsted have a lack of interest in School Travel Plans.

Based on information from the Department of Education's performance tables and the presence of STPs, there is no strong correlation between academics and active travel. Figures 4.5 compares schools' performances in Ofsted for those with and without STPs.
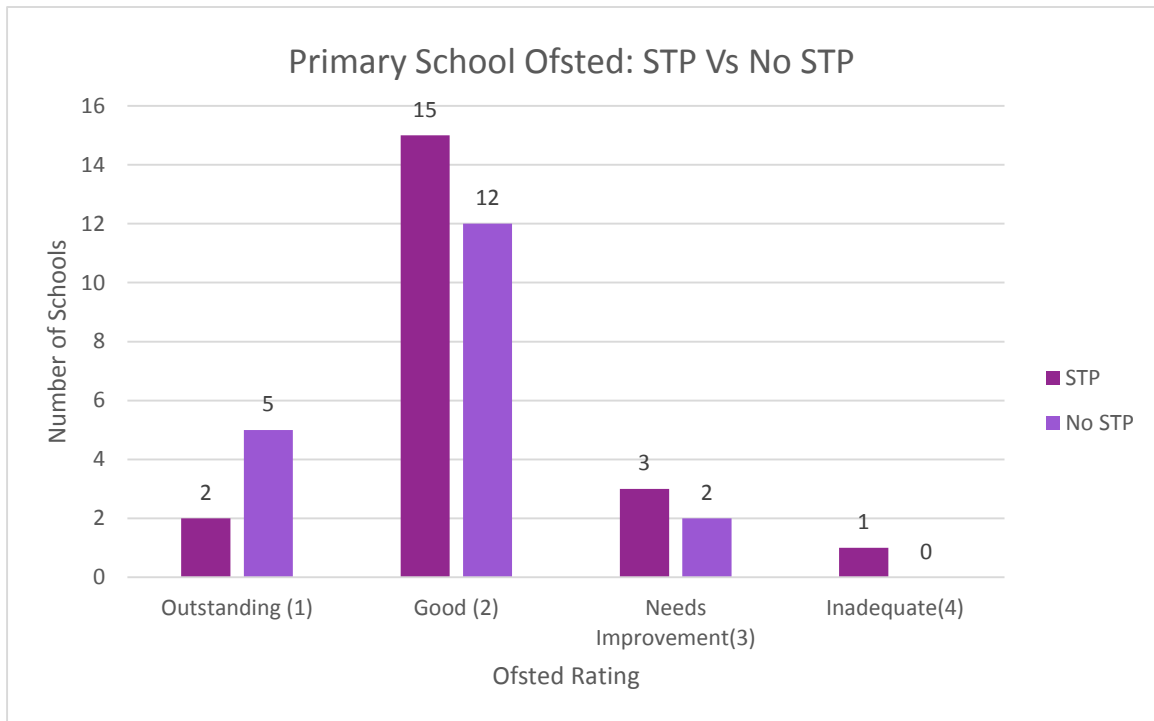
Figure 4.5: Primary School Ofsted: STP vs. no STP

Finding 13: Approximately 85% or 88 of the 104 of total Croydon schools received a 2014 Ofsted ranking of "Good" or better.

In 2014, about 85% (88) of the 104 total Croydon schools received 'Good' or better in their Ofsted report, and 19% (20) schools were rated as 'Outstanding.' In comparison to other London boroughs that we visited, the percentage of schools that achieved 'Outstanding' are as follows: Hackney (22 schools, 30%) and Brent (16 schools, 20%). Ofsted inspectors only visit schools that achieve 'Outstanding' if a problem arises, and schools that score 'Good' are visited once every three years which means that only about 15% of Croydon Schools are monitored closely by Ofsted. According to the 2015 Department of Education Performance Tables, in 2014-2015 Croydon schools have seen slight improvement in Ofsted scores, however, some remain below standards. Mr. David Butler of the School Performance Team in Croydon Council noted that schools that

have reached 'Outstanding' can also fall behind, especially if they are not inspected often. Schools that receive an inspection report of 'Good' or better are inspected once every three years.

Schools that received inspection levels of either 3 ('Requires Improvement') or 4 ('Inadequate') require special measures by the local authority. These special measures include constant monitoring of school progress and if no positive change is observed, then the government or the local authority makes adjustments by replacing leadership, taking control, or closing the school. This is a large matter for many schools, which can lead to focuses being shifted from alternative travel to improving academics.

Parents want the best education for their child, which may mean choosing a school that is not within walking, cycling, or scooting distance. Parents living anywhere within London, can send their children to any school in the city of London, they just have to apply, and many parents use Ofsted as a way of judging schools. Schools display their high accomplishments in Ofsted by posting Ofsted ratings on their website or banner as seen in Figure 4.5 below.

Figure 4.6 Park Hill Junior School, London Borough of Croydon, Ofsted Display

Schools that receive either 'Needs Improvement' or 'Inadequate' require special measures to improve overall conditions, and as these changes occur, many school administrators find little time to focus on activities like School Travel Plans. In 2012, Addington High School, scored

'Inadequate' in Ofsted, requiring many changes in management and overall curriculum. Mr. Houston, Business Manager of Addington High School, explained how the school's General Certificate of Secondary Education (GCSE) scores and improving their Ofsted rating has become the main focus.

Finding 14: Strong school leadership can facilitate increased involvement in active school travel.

Leadership is a large aspect in Ofsted inspections and since Addington High School is making this transition, its Ofsted reports and participation in STPs are likely to improve. To manage and maintain a School Travel Plan, leadership is the main priority; in fact the importance of having a good Headteacher and school governors has been mentioned at every school visit we have made. Mr. David Butler described governors as those who manage school policies, curriculum, and how the school runs. The panel of governors is comprised of a group of volunteer members of the community including parents. These leaders decide the direction of the school, and decide specific involvements in activities like School Travel Plans. Many leaders are unaware that by establishing a STP, Ofsted would recognize their school as performing leadership actions for the betterment of the students thus potentially improving inspection ratings.

Finding 15: There is no strong correlation between schools having School Travel Plans and performing better on exams.

Ofsted also assesses school Achievements which are calculated based on progress in the classroom, test scores, and the potential to improve. During our analysis, we found that having a STP can improve school performance. Using the list of 25 schools provided by Mr. Campbell and Mr. McDonald, as well as other Croydon schools selected from the Department of Education

database, to create a combined list of 66 schools. Using information provided by the Board of Education's Performance Tables, we divided schools into two tables, Key Stage 2 (KS2, ages 7-11) and Key Stage 4 (KS4, ages 14-16). The performance of KS2 looked at the percentage at each school of students achieving high levels in writing, reading, and math, and KS4 looked at the percentage of students performing well in GCSE exams. In addition, we used information from STARS to see if a school had an updated STP, and considered the school as having an updated School Travel Plan if that plan was after 2012. We chose the year 2012, since Mr. Campbell recommended that plans after 2012 would be the most updated.

Looking at 51 schools in KS2, we found no strong correlation between students' performance and the establishment of a STP. Comparing these scores with whether if they had STPs, we found that 80% of schools with STPs had above national average performance while schools without STPs performed 90% above national average (see Figure 4.6, and Appendix D for full data table). We hypothesized that schools that do not have School Travel Plans would haveslightly better exam scores to be a logical conclusion based on the notion that schools that focus heavily on academics.

In KS4, of the 15 schools we looked at, we found no pertinent correlation between school performance and School Travel Plans. About 33% of secondary schools have School Travel Plans, and this is due to the high importance of GCSE. According to David Harding and Ron Houston, many secondary schools focus on GCSE exams due to the effect it has on student acceptance to specific high schools and put School Travel Plans as a lower priority. See Appendix D for the data used for this finding.

Key Stage 2 Performance: STPs Vs No STP(51 Schools)
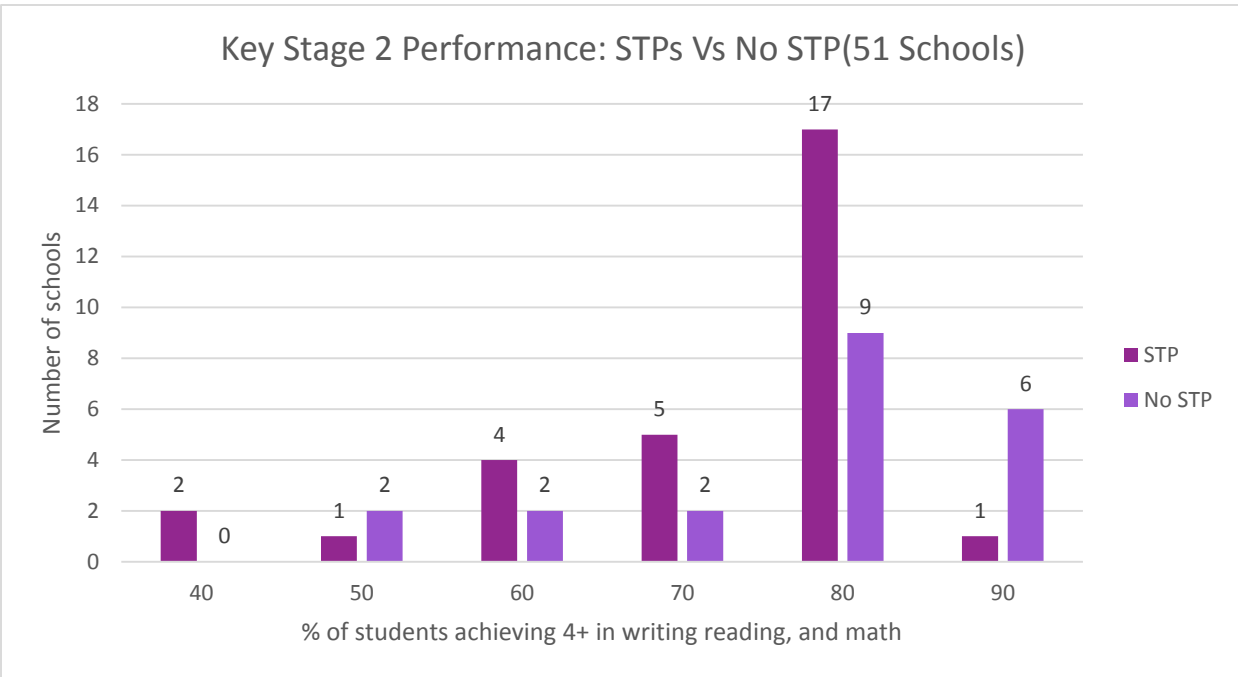
Figure 4.7: Key Stage 2 Performance: STPs vs. no STPs

Finding 16: New developments in Ofsted and Health and Wellness Sections of Ofsted strengthen the case for using STPs as way of improving Ofsted inspections.

Healthy lifestyles and child safety are other aspects of Ofsted that focus more on students' personal wellbeing, but we have found that this is an excellent area to promote usage of School Travel Plans. We were curious since this area related highly to STPs, and therefore we inquired why STPs were not included in Ofsted. According to Mr. Butler, in the mid- 1990s Ofsted included STPs but due to an over encumbered list of inspection items, they were forced to limit the amount to inspect. Based on an online survey about STPs and Ofsted (See Appendix C), eight out of ten schools that replied answered that if they knew areas of School Travel Plans could correlate to improving Ofsted they would participate more in STPs. A recent development of Ofsted is that beginning in September, 2015 a change of the current framework will support active travel and student health. During the Pan London Conference, Ross Butcher, School Engagement Official in

Transport for London, explained that Transport for London (TfL) and STARS are also aware of the inclusion of School Travel Plans in Ofsted inspections and discussions of integration are in the process.

Based on Mr. Butcher's statements, schools would be inclined to maintain School Travel Plans and become accredited if STARS merges into Ofsted. However, this is no incentive for Academies and Independent schools since they are not assessed by Ofsted, but instead are overseen by Independent Schools Inspectorate, over which the Council has no control. This may be an area that needs further research.

5 Recommendations and Conclusions

From our research, we have learned that schools are very diverse and have individual issues that have restricted them from participating in School Travel Plans. We have developed the following 13 recommendations to address the lack of engagement in School Travel Plans in Croydon. These recommendations are as follows: increase the use of 'Lollipop' Volunteers, assign a Traffic Warden to schools that are within close proximity of one another, engage schools in regular discussions with the Council, finish creation of a step-by-step guide for starting a School Travel Plan, form an integrated School Travel Team in Croydon Council, hold more school travel-related events**,** update newsletters, and show schools how STPs correlate with Ofsted.

Recommendation 1: Increase the use of 'Lollipop' Volunteers.

Lollipop volunteers, are trained, on call community members that drive to the school and hold crossing signs, especially near busy roads. From what we have learned, there is a decreased amount of lollipop volunteers to help children cross roads. We recommend conducting outreach to parents and community members to increase the number of lollipop volunteers at each school. With 91% of 23 respondents to our online survey stating the schools are located near busy roads, many could use the support of having a lollipop volunteer.

Recommendation 2: Assign a traffic warden to schools that are within close proximity of each other.

A traffic warden would help to increase the safety at not just one school, but the entire area. Assigning traffic wardens would decrease the amount of parents parking in front of the school in fear of receiving a ticket. New Valley Primary School shares a street with two other schools, and

therefore drop-off and pick-up times can be very hectic. Ms. Sheena Taylor explained that having a traffic warden present during these times would assist with the enforcement of traffic orders. Addington High School started using surveillance cars, but they are not always available. It is more reliable to have a traffic warden present for complete surveillance. We also suggest speaking with the local Metropolitan police to see what can be done to put this in place.

Recommendation 3: Engage schools in regular discussions with the Council.

With this communication, both the schools and the Council will attain complete transparency about road safety problems so they can be addressed appropriately and will be up-to-date on what needs to be changed or works well. Also, schools can gain more understanding of why certain road safety improvements have or have not been implemented, such as why crosswalks are in particular places or are nonexistent.

We recommend that as Mr. Campbell moves into his new position of School Travel Plan Coordinator, he offers personal meetings at schools. During these meetings, Mr. Campbell can explain what his goal is for the borough in terms of school travel, what he can do for the school, and what services the Council can provide for the school. Conducting these personal meetings will in turn create a relationship that can allow easier communication with schools. This recommendation is based on what we observed from the London borough of Hackney, where the Alternative Transportation Coordinator, Robert Sambrooks, described his position as someone who can assist schools with any issues and make school travel planning more effective. In addition, Mr. McDonald added that communication with schools can change due to teachers coming and going from schools so it's important to reach out to the schools often to establish a line of communication.

Recommendation 4: Finish creation of step-by-step guide for starting a School Travel Plan.

Started by Lewis Campbell, a step-by-step guide for creating School Travel Plans can be an easy way for schools to increase engagement in active travel. The guide will educate schools about composing School Travel Plans and setting up initiatives. The initial guide created contains information to help school faculty to understand STARS, School Travel Plans, and how to become accredited. We created an outline for additions to the guide (see Appendix E for the outline). We recommended showing schools how they can interact with the Council and the support that is available to them. In addition, the guide can help schools understand the role of a "School Champion" including their role is in the school, what their duties are, and the benefits of one. In conclusion, by sharing this step-by-step guide, schools will have a clear road map to begin their creation of a School Travel Plan.

Recommendation 5: Form an integrated School Travel Team in Croydon Council.

An integrated School Travel Team is a team comprised of members of the Council from different departments who work together and contribute their own resources to tackle school travel related issues. We suggest setting up meetings once a week and having a position of 'School Travel Plans Coordinator' who informs the team of any issues that have been presented. Then a collaboration can begin on what department can address these issues. For example, if the matter was on cycling, the team member who focus on cycling in Croydon could tackle this issue. However, someone from the Road Safety Team might recommend a provision to help mitigate an issue. So with this collaboration, multiple issues are solved effectively with now multiple input from within the Council. In conclusion, by forming this School Travel Team, the amount of issues

that could be addressed would increase school travel participation since any issues will be solved in an effective manner.

Recommendation 6: Hold more school travel-related events (i.e. workshops, conferences, assemblies).

For this recommendation, we would like the Council to begin to hold more school travel events. These events can include workshops and conferences to allow schools within the community to collaborate and learn new ideas of tackling school travel-related issues. Additionally, these events allow the Council to effectively convey any points of interest, whether they be initiatives, road safety, or STARS information.

Recommendation 7: Update School Travel Newsletter.

We recommend using the London Borough of Hackney's Newsletter (see Appendix F) provided by Mr. Robert Sambrooks, as a model when developing a School Travel Newsletter. The Hackney newsletter is effective since it is easy to read, visually appealing, and informative. These newsletters are key for informing schools what is happening in terms of school travel, whether it's TfL related, Borough events, initiatives, workshops, or anything the Council wants to mention. This is also more effective than sending emails and can easily spread the message. We suggest using simple wording and more graphics to increase interest.

Recommendation 8: Show schools how certain areas of School Travel Plans correlate with Ofsted.

Figure 5.1 is a matrix of areas of Ofsted and points that School Travel Plans can be beneficial towards. Schools will be more inclined to participate if this can help with their Ofsted,

especially with the new framework of the inspection being released in September 2015. Finally, not only would the participation of School Travel Plans increase but so would the quality of the schools in Croydon.

Areas of Ofsted	Correlation in School Travel Plans
Achievement of pupils	• Improvement of brain activity • Integration in curriculum • Teaches new skills (i.e. bicycle riding, navigating)
Leadership and management	• School Champions • Extra circular activities • Interacting with parents/pupils • JRSO/JTAs
Behaviour and Safety	• Road Safety • Children in better mood
Health and Wellness	• Reduces Obesity • Promotes active lifestyle

Figure 5.1 Areas to highlight with STPs on Ofsted

Recommendation 9: Place special safety cameras outside schools to keep parents behaviour in check.

Clive Whittle, a senior engineer in Croydon Council, identified special road safety cameras in use at parts of the borough as a possible solution. These cameras captured licence plate details of speeding vehicles and sent warning notices to those who were caught excessively speeding. He noted that from experience, there had been no repeat offense by those who had received warnings.

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This system could be adopted for the school environment to detect violations of other traffic orders such as parking on double-yellow lines or on crosswalks. This would make parents more conscious of their actions even when there is no traffic warden present.

Recommendation 10: Use children to appeal to parents to stop disruptive behaviours.

A member of staff from Oasis Academy, revealed to us that a very effective method to curb parent issues was to have students, usually JRSOs, take license number and names, if possible, of cars violating traffic orders. This list was then put up on the school bulletin board. Out of embarrassment, students whose details had come up would appeal to them to change behaviour. This was a very effective use of what Tracy Porter called "pester power", and the school had noticed results after implementation.

Recommendation 11: Provision of cycling lanes on school routes will help promote active travel.

Croydon Council can take advantage of Mayor Boris Johnson's plan to increase road safety, which includes the provision of adequate cycling lanes all over the city. In his road safety action plan for 2020, "Safe Streets for London", the Mayor lays emphasis on increasing funding to support boroughs in making the roads safer (Transport for London, 2013). In order to maximize funds the Council has access to, we recommend enlisting the services of a team of students at University College London. We learnt about this team at the Pan London Conference, and they are currently working with the London Borough of Camden to optimize the installation of cycling routes using a software suite called Space Syntax. Space Syntax is a scientific approach to investigating the connection between spatial layout, i.e. building and road placements, and a host of economic and social occurrences.

Recommendation 12: The Council can recommend third-party organizations to help schools promote active travel.

Sustrans is a UK charity that aims to promote sustainable travel. They do this through large projects such as the National Cycle Network, which is a series of safe, traffic-free cycling paths and walking routes. However, they also operate on a smaller scale by planning and running active travel initiatives for schools. A member of staff at Priory School revealed that Sustrans was a major factor in helping the school in gaining Bronze accreditation, and already applying for Silver after just a year. According to her, Sustrans took off the burden of planning and running initiatives the school proposed, as well as offer new initiatives.

One of such initiatives is Bike It, which provides cycling training for students in various schools. By running this initiative, schools can increase the number of students with the ability to cycle to school. Members of staff from Shirley High, New Valley Primary and Brentfield Primary disclosed that bike-training programs had high participation, which underlines the desire for students to cycle to school, shown in Figure 4.1. Schools that are struggling with STARS accreditation and student participation in active travel can take advantage of these services from Sustrans.

Recommendation 13: Schools should be notified that the Road Safety Team in the Council solves road safety issues once they appear in School Travel Plans.

Clive Whittle, a senior engineer in Croydon Council, explained that the Road Safety Team responds to requests once they appear in an STP. Therefore, each school that contacted the Road Safety Team was required to have an STP since this would not only have their immediate issues addressed, but also provide increased safety in other areas. A member of staff from Oasis Primary

mentioned how shortly after reporting a crossing issue in their STP, a pelican crossing was put in place. If schools were made aware of how committed the Road Safety Team is to helping solve their problems, they may be more inclined to implement a STP.

Conclusion

Every school is in a unique environment and may not be engaged with active travel for many reasons. The main causes of a lack of school engagement include:

- High focus on school performance (i.e. Ofsted)

- Lack of knowledge regarding Council support

- Teachers' busy schedules

- Transitioning to Independent schools or Academies

- Road safety concerns (pedestrian and cyclist)

- Unreliability of public transport

- Availability of cycle and scooter storage facilities

However, the future is not bleak. There are many ongoing changes that will facilitate the increased participation of Croydon schools in active travel in the future such as the new Ofsted framework. Furthermore, the recommendations we developed based on our findings from investigating Croydon schools will help the Council elicit better engagement from schools regarding School Travel Plans and STARS.

List of References

Atkinson, R. W., Barratt, B., Armstrong, B., Anderson, H. R., Beevers, S. D., Mudway, I. S., . . . Kelly, F. J. (2009, November). The impact of the congestion charging scheme on ambient air pollution concentrations in London. *Atmospheric Environment , 43*(34), 5493-5500 .

BBC. (2012, 12 10). *Up to 9% of deaths in London caused by air pollution*. Retrieved 3 30, 2015, from BBC: http://www.bbc.com/news/uk-england-london-20664807

Bell, A. H. (2008). *London Was Ours : Diaries and Memoirs of the London Blitz.* London: I.B. Tauris & Co Ltd.

The Big Pedal. (n.d.). Retrieved March 29, 2015, from http://www.sustrans.org.uk/our-services/who-we-work/teachers/big-pedal.

Cavill, N. D., & Rutter, H. (. (2013). *Obesity and the environment: increasing physical activity and active travel.* Public Health England. London: Crown.

City of London Air Quality Strategy 2011-2015. (2011, March 1). Retrieved April 5, 2015, from http://www.cityoflondon.gov.uk/business/environmental-health/environmental-protection/air-quality/Documents/City of London Air Quality Strategy Feb 14.pdf

Congestion Charge- TFL. Retrieved March 21, 2015, from http://www.tfl.gov.uk/modes/driving/congestion-charge

Cooper, Charlie. "Air Pollution Linked to One in 12 Deaths in London – and It Takes Six Months off the Average Briton's Life Expectancy." *The Independent*. Independent Digital News and Media, 10 Apr. 2014. Web. 21 March 2015.

Dargay, J., & Gately, D. (1999, February). Income's effect on car and vehicle ownership, worldwide: 1960–2015. *Science Direct, 33*(2), 108-138.

Department for Transport. (2013). Licensed vehicles by body type, Great Britain, annually1: 1994 to 2013. Department for Transport. Retrieved March 28, 2015 from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/184124/veh0102.xls.

Department for Transport. (2014). *Annual Bus Statistics: England 2013/14.* Department for Transport. Office for National Statistics.

EPUK-"Car Pollution." *Environmental Protection UK*. Environmental Protection UK. Web. 21 Mar. 2015. http://www.environmental-protection.org.uk/committees/air-quality/air-pollution-and-transport/car-pollution/

Flynn, M. A., McNeil, D. A., Maloff, B., Mutasingwa, D., Wu, M., Ford, C., & Tough, S. C. (2006, February). Reducing obesity and related chronic disease risk in children and

youth: a synthesis of evidence with 'best practice' recommendations. *Obesity Reviews, 7*(s1), 7-66.

Goodyear, S. (2013, February 5). The Link Between Kids Who Walk or Bike to School and Concentration. Retrieved April 5, 2015, from http://www.citylab.com/commute/2013/02/kids-who-walk-or-bike-school-concentrate-better-study-shows/4585/

Greater London Authority. (1999, November 11). *Greater London Authority Act 1999*. Retrieved June 17, 2015, from Legislation.gov.uk: http://www.legislation.gov.uk/ukpga/1999/29/contents

Greater London Authority. (2008). *Driving Change: Exploring solutions to travel congestion in London.* London Assembly, Transport Committee. London: Greater London Authority.

Green, C. (2014, 12 01). *Boris Johnson wants car-free Sundays for London amid warning of congestion*. Retrieved 06 03, 2015, from Independent: http://www.independent.co.uk/news/uk/home-news/boris-johnson-wants-carfree-sundays-for-london-amid-warning-of-congestion-9894509.html

Ham, v. H., & Rijsenbrij, J. (2012). *Development of Containerization.* Amsterdam, The Netherlands: IOS Press BV.

HM Government. (2010). *Healthy Lives, Healthy People: Our strategy for public health in England.* London, UK: Crown.

Horton, D. D., Cox, P. D., & Rosen, P. D. (2007). *Cycling and Society.* Hampshire, England: Ashgate Publishing Limited.

Houton, T. J., & Callandar, B. A. (1992). *Climate Change 1992.* Cambridge, UK: Press Syndicate of the University of Cambridge.

Imbs, J. (2010, October 5). The First Global Recession in Decades. *IMF Economic Review, 58*, 327-354.

Kampa, M., & Castanas, E. (2008, 01). Human health effects of air pollution. *Environmental Pollution, 151*(2), 362-367.

Lifestyles Statistics Team. (2014). *Statistics on Obesity, Physical Activity and Diet: England 2014.* Health and Social Care Information Centre. Health and Social Care Information Centre.

London City Hall. (n.d.). Retrieved June 25, 2015, from https://www.london.gov.uk/priorities/environment/clearing-londons-air

(2011). *London Travel Demand Survey.* Transport for London. London: Transport For London.

(2015) London's population hits 8.6m record high. BBC. Retrieved June 20, 2015, from http://www.bbc.co.uk/news/uk-england-london-31082941

McDonald, P. (2015, March 31).

Metropolitan Police Crime Mapping. (n.d.). Retrieved March 30, 2015, from
        http://maps.met.police.uk/?areacode=E09000008

Office for National Statistics. (2014). *Defra National Statistics Release: Air quality statistics in
        the UK, 1987 to 2014.* Department for Environment, Food and Rural Affairs, London.

Panter, J. R., Jones, A. P., & Sluijs, E. M. (2008, June 23). Environmental determinants of active
        travel in youth: A review and framework for future research. *International Journal of
        Behavioral Nutrition and Physical Activity.*

Phalen, R. F., & Phalen, R. N. (2013). *Introduction to Air Pollution Science—A Public Health
        Perspective.* Irvine, California: Jones & Bartlett Learning.

Prof A. Seaton, M., D. Godden, M., W. MacNee, M., & K. Donaldson, P. (1995, 01 21).
        Particulate air pollution and acute health effects. *The Lancet*, 176-178.

Prof Bert Brunekreef, P., & Prof Stephen T Holgate, M. (2002, 10 19). Air pollution and health.
        The Lancet, 360(9341), 1233-1242.

Pucher, J. P., Buehler, R. P., Bassett, D. R., & Dannenberg, A. L. (2010, October). Walking and
        Cycling to Health: A Comparative Analysis ofCity, State, and International Data.
        American Journal of Public Health, 100(10), 1986-1992.

Sustrans. (2008). *Take action on active travel.* Bristol: Sustrans.

The Great Smog of 1952. (2015, June 21). Retrieved from Met Office:
        http://www.metoffice.gov.uk/learning/learn-about-the-weather/weather-phenomena/case-
        studies/great-smog

(2011) "The 10 Largest Cities in Europe | TouristMaker." *TouristMaker*. N.p., 17 May 2011.
        Web. 25 June 2015.

Transport for London. (2005). *Central London Congestion Charging Scheme Impacts
        Monitoring: Summary Review.* London.

Transport for London. (2013). *Drivers of Demand for Travel in London: A review of trends in
        travel demand and their causes.* London.

Transport for London. (2013). *Safe Streets for London, The Road Safety Action Plan for London
        2020.* Roads Task Force. London: Transport for London.

Transport for London celebrates 'star' schools in promoting safer travel. (2014, November 11).
        Retrieved March 30, 2015, from http://www.tfl.gov.uk/info-for/media/press-
        releases/2014/november/tfl-celebrates-star-schools-in-promoting-safer-travel.

Underground, overground; Transport in London. (2013, October 19). *The Economist, 409*(8858), 61-62.

Wang, C. (2010). *The relationship between traffic congestion and road accidents: an econometric approach using GIS.* Loughborough University Institutional Repository. Loughborough: Chao Wang.

Webster, N. (2006). *The effect of newly installed Puffin crossings on collisions.* London Road Safety Unit, London.

Whitsett, J. A., & Weaver, T. E. (2015, May 1). Alveolar Development and Disease. *ATS Journals*.

Wilcox, A. (2015, March 13). *Corporate Wellness: Work Smarter, Not Harder*. Retrieved from ApplicantPro: applicantpro.com/articles/Corporate-Wellness-Work-Smarter-Not-Harder

World Health Organization. (2014, March 01). *Ambient (outdoor) air quality and health*. Retrieved April 3, 2015, from World Health Organization: http://www.who.int/mediacentre/factsheets/fs313/en/

WOW-Walk-on-Wednesday in Croydon. (2013, April 25). Retrieved March 30, 2015, from http://www.wpi.edu/Pubs/E-project/Available/E-project-042513-071014/unrestricted/WPI_WoW_Final_IQP_Report.pdf.

Zero Heroes United: Fighting the Fight against Air Pollution in Croydon. (2013, June 19). Retrieved March 29, 2015, from https://www.wpi.edu/Pubs/E-project/Available/E-project-061913-163637/unrestricted/Final_IQP_Report_Zero_Heroes.pdf.

6 Appendices

Appendix A: STARS accreditation criteria (Source: TfL STARS)

STARS Accrediation	Description
Bronze	- Demonstrates commitment to encouraging safe and active travel - Makes use of borough resources - Reports on annual basis
Silver	- Demonstrates decreased car use - School travel working group is in place where pupils are involved in planning school travel - Five consultation criteria need to have been met over the previous three academic years, to find out people's views and involve the wider community in travel activities.
Gold	- Demonstrate highest level of participation. - Recognized at City hall - Innovative travel activities - Pupil led projects (i.e. JRSOs, JTA, YTA)

Appendix B: Interview Questions and Notes

We are students from Worcester Polytechnic Institute in Massachusetts. We are conducting this interview to obtain feedback to improve School Travel Plans at schools in Croydon. Please answer the following questions to the best of your ability. If you would like to see our final report, you can locate it at www.wpi.edu/academics/library.html by searching for our project title, "Encouraging School Travel Plans in the Borough of Croydon."

Questions for head teachers

- What is your view or the school's view on alternative transport?
- Do students use alternative means of transport?
    - On average how many of your students use alternative means of transport?
- What initiatives has the school implemented?
    - If any, discuss
        - Have they been effective? If so How?
            - If no, why not?
        - Ask about specifics
            - Numbers
            - Programs
            - How long have they been doing them?
    - If no initiatives/ lack of
        - Reasoning
- Road Safety
    - Road Conditions
        - Crosswalks
        - Sidewalks
        - Road lines
        - Parking
    - Crossing Guard?
    - Safety measures implemented

- Faculty
    - Who is the main person involved?
    - School Travel Champion?
    - Level of Interest
    - Possible members we can talk with
- Parents
    - PTO?
    - Level of Involvement
    - Attitude towards programs
    - Issues that have been brought up
- Future
    - Future plans
    - Where would you like your school to be in the future (in terms of alternative transport)?
    - What improvements do you hope to make within the next year?
- Is it okay if we contact you if we have any follow-up questions?
- We will give you instructions on how to find our completed report if you would like.

Questions for faculty

- What is your view or the school's view on alternative transport?
- Do students use alternative means of transport?
    - On average how many of your students use alternative means of transport?
- Explain your role in promoting alternative transport
- What parts of the initiatives have worked?
- What has been the biggest factor in the success/failure of the initiatives?
    - Based on response dig deeper into this response
- How supportive have parents been of initiatives?
    - Expand to see if parent surveys are necessary
    - Have there been any issues brought up by them?
- Are there any reasons why parents would not want their student to walk or bike to school?

- o   Anything specific to the school?
- Road Safety
  - o   Road Conditions
    - ▪   Crosswalks
    - ▪   Sidewalks
    - ▪   Road lines
    - ▪   Parking
  - o   Crossing Guard?
  - o   Safety measures implemented
- How do the students react to the programs?
  - o   Have they talked about it during class?
    - ▪   Good things?
    - ▪   Bad things?
  - o   What parts have the most impact?
  - o   What parts were lacking?
  - o   What parts of the initiatives need improvement?
    - ▪   Get specific
- Has sustainability been integrated in your curriculum?
  - o   If so give specifics
- What motivates you as a faculty member to become involved?
- How do they (if they do) recognize faculty members whom have put forth the most effort in these programs?
- Future
  - o   Future plans
  - o   Where would you like your school to be in the future (in terms of alternative transport)?
  - o   What improvements do you hope to make within the next year?
- Is it okay if we contact you if we have any follow-up questions?
- We will give you instructions on how to find our completed report if you would like.

Appendix C: Surveys

All our surveys contained the following disclaimer:

We are students from Worcester Polytechnic Institute in Massachusetts. We are conducting this survey to obtain feedback to improve School Travel Plans at schools in Croydon. These surveys are voluntary and anonymous. Please do not write your name. Please answer the following questions to the best of your ability. If you would like to see our final report, you can locate it at www.wpi.edu/academics/library.html by searching for our project title, "Encouraging School Travel Plans in the Borough of Croydon."

Online survey: School Travel Plans

Q1 School Name:

Q2 How old is your School Travel Plan (STP)?

❍ Don't have one
❍ Less than 3 years old
❍ Older than 3 years
❍ What is an STP?

Q3 Is your school a member of Healthy Schools?

❍ Yes
❍ No

Q4 Do you participate in Walk on Wednesday?

❍ Yes
❍ No

Q5 Is there a bike training program at your school?

❍ Yes
❍ No

Q6 Do you include any aspects of active travel in your curriculum?

❍ Yes
❍ No

Q7 Is there a member of staff who has been assigned to promote active school travel (a School Travel Champion)?

❍ Yes
❍ No

Q8 Does the condition of the pavements around the school discourage pupils from walking to school?

❍ Yes
❍ No

Q9 Do you have school exits that would benefit from having a guard rail?

❍ Yes
❍ No

Q10 Are you close to a busy road?

❍ Yes
❍ No

Q11 Do you have/run the Junior Road Safety Officer or Junior Travel Ambassador programs?

❍ Junior Road Safety Officer
❍ Junior Travel Ambassador
❍ Both
❍ None

Q12 Does your school require any additional School Warning signs or School Keep Clear markings?

❍ Yes
❍ No

Q13 Please rate the following at your school

	None (1)	Low (2)	Moderate (3)	High (4)	Very High (5)
How much use is made of your cycle/scooter storage?	❍	❍	❍	❍	❍
How regular is your communication with the council over travel issues?	❍	❍	❍	❍	❍
What is the level of student involvement in active travel initiatives?	❍	❍	❍	❍	❍
What is the frequency of traffic incidents involving students?	❍	❍	❍	❍	❍
How much parent/community involvement is there with the school?	❍	❍	❍	❍	❍
How much parent/community involvement is there with active travel?	❍	❍	❍	❍	❍
How prevalent is crime in the area?	❍	❍	❍	❍	❍
What is the level of staff involvement in active travel?	❍	❍	❍	❍	❍
How congested does it get outside your school in the morning?	❍	❍	❍	❍	❍
How reliable are bus, tram or train services to your school?	❍	❍	❍	❍	❍

Q14 General comments. If you would like a copy of our report when finished please include an email address we can send it to. Thank you

Online survey: Ofsted

Q1 School Name

Q2 What was your Recent Ofsted Inspection Rating?

○ Inadequate
○ Needs Improvement
○ Good
○ Outstanding

Q3 Do you have a School Travel Plan?

○ Yes
○ No

Q4 Is your School Travel Plan mentioned in your Ofsted Report?

○ Yes
○ No

Q5 Would you participate more in School Travel Plans if you knew it could correlate to Ofsted?

○ Yes
○ No

Q6 Comment or Questions regarding Ofsted

Paper survey: Student reactions to road safety theatre production

1. **Did you enjoy the performance today?**

Yes	No

2. **What was your favorite part?**

_____

_____

3. **What was your least favorite part?**

_____

_____

4. **Do you have any recommendations for the performance?**

_____

_____

5. **Will you change your road safety behaviors after watching the performance?**

Yes	No

6. **What would you like to learn more about from this performance?**

_____

7. **Do you have any further comments?**

_____

Appendix D: Key Stage Data Tables

School/Area	Scores 2012	Scores 2013	Scores 2014	STARS '12	STARS '13	STARS'14	STP?	Date of Ofsted	Recent Ofsted
All Saints CofE Primary	70	73	58	None	None	None	no	Jun-14	3
Beaumont	89	90	96	None	None	None	no	Jan-13	2
Castle Hill	42	44	50	None	None	None	no	Jun-11	2
ChipStead Valley	83	80	86	None	None	None	no	Mar-13	1
Coulsdon CofE	87	86	93	None	None	None	no	Nov-11	1
Ecclesbourne Primary	58	74	73	None	None	None	no	Feb-14	2
Elmwood Junior	72	81	84	None	None	None	no	Jul-13	2
Fairchildes primary	80	93	98	None	None	None	no	Feb-12	2
Gilbert Scott Primary	73	65	70	None	None	None	no	Sep-11	2
Gonville Academy	73	88	83	None	None	None	no	Jun-12	2
Howard Primary	80	77	86	None	None	None	no	Dec-11	2
Kenley	65	91	95	None	None	None	no	Nov-13	2
Kingsley	72	93	82	None	None	None	no	Oct-12	2
Orchard Way Primary	80	83	90	None	None	None	no	May-08	1
Ridgeway Primary	87	87	87	None	None	None	no	Jan-15	1
St.Johns CofE	81	93	93	None	None	None	no	Oct-10	2
St.Thomas	86	87	93	None	None	None	no	Sep-07	1
West Thornton	89	92	89	None	None	None	no	Sep-12	1
Margaret Roper Catholic	82	77	82	None	None	None	no	Mar-14	2
Norbury Manor Primary	62	72	62	None	None	None	no	Mar-13	3
St.Mark's CofE	91	59	61	None	None	None	no	Jun-11	3
St.Peter's	90	79	86	None	None	None	no	Jan-13	2
Aerodrome	78	74	80	Bronze	None	Bronze	yes	Jul-12	2
Ark Oval Primary	63	71	64	None	Bronze	Bronze	yes	Dec-12	2
Atwood	82	88	84	Gold	Gold	Gold	yes	Dec-08	1
Beulah Junior	69	74	75	None	Bronze	Bronze	yes	Oct-14	2
Broadmead Junior	52	51	52	None	None	Bronze	yes	May-12	3
Christ CofE Primary	71	77	87	None	None	None	yes	Nov-11	2
Courtwood	72	93	87	Bronze	Bronze	Bronze	yes	Feb-14	2
David Livingstone	88	83	83	None	Gold	Gold	yes	Apr-12	2
Downsview Primary	80	86	81	Bronze	None	Bronze	yes	Mar-15	2
Forest Academy	84	75	79	Bronze	Bronze	Bronze	yes	Sep-11	3
Forestdale Primary	80	87	81	None	Bronze	Silver	yes	Nov-12	2
Good Shepard Catholic	76	83	83	Bronze	Bronze	Bronze	yes	Sep-12	2
Greenvale Primary	67	84	78	None	None	None	yes	Jun-13	2
Kensington Aveneue	78	67	82	None	None	None	yes	Feb-15	3
Keston	72	83	92	None	Bronze	Bronze	yes	Jun-13	2
Monks Orchard Primary	82	73	69	Bronze	Bronze	Bronze	yes	Feb-14	2
Oasis Academy Byron	75	74	80	Bronze	Bronze	Bronze	yes	Jun-11	2
Oasis Academy Shirley	73	84	83	None	None	None	yes	Nov-13	1
Parish Junior	77	66	83	None	Bronze	Bronze	yes	Jun-14	4
Park Hill	69	82	78	None	None	Bronze	yes	Oct-14	2
Purley Oaks Primary	61	72	79	None	None	None	yes	Dec-14	2
Rockmount	75	91	87	Gold	Gold	Gold	yes	May-10	2
Rowdown	68	76	66	None	None	Bronze	yes	None	None
Smitham Primary	75	75	80	None	None	None	yes	Feb-12	2
Winterbourne Girls	82	72	49	None	None	Bronze	yes	Nov-12	2
Wolsey Junior	73	41	65	None	None	None	yes	None	None
Woodcote Primary	77	84	84	Bronze	Bronze	None	yes	Apr-15	1
Ryelands School	60	59	40	Bronze	None	None	yes	Jun-12	3
St.Cyrian's Greek Orthodox	100	94	83	None	Bronze	Bronze	yes	Sep-14	2
St.James the Great RC	82	80	87	Bronze	Bronze	Bronze	yes	Oct-12	1
England	75	75	78						
LA	74	74	75						

Figure 6.1 Key Stage 2 Performance Table

school/area	2011	2012	2013	2014	STARS '11	STARS '12	STARS '13	STARS '14	STP?	Ofsted Date	Ofsted Rating
Key Stage 4 Performance- % achieveing 5+ A*-C GCSE, STARS, STPS, and Ofsted Ratings											
Archbishop Tenison	69	65	68	70	None	None	None	None	no	May-13	2
Coloma Convent	90	94	95	90	None	None	None	None	no	Sep-09	1
Croydon	61	62	64	57	None	None	None	None			
Edenham High	51	47	58	44	None	None	None	None	no	Oct-11	2
England	59	59	59	53	None	None	None	None			
Harris Academy Purley	61	63	76	77	None	None	None	None	no	Dec-11	1
Harris Academy South Norwood	75	80	78	67	None	None	None	None	no	Jan-10	1
Norbury bussiness	68	62	65	63	None	None	Bronze	Bronze	yes	Jun-13	2
Oasis Academy Coulsdon	49	67	63	45	None	None	None	None	no	Mar-15	2
Oasis Academy Shirley	51	66	64	58	None	None	None	None	yes	Nov-13	1
Riddlesdown	69	59	67	74	None	None	None	None	yes	Oct-11	2
Shirley High School	71	72	63	52	None	None	None	None	yes	Jan-14	3
St.Joseph's College	67	65	64	56	None	None	None	None	no	15-Jan	3
St.Mary's High	51	40	52	42	None	None	None	None	no	14-Jan	3
Thomas More Catholic	57	75	80	63	None	None	None	None	no	Nov-14	3
Virgo Fidelis Convent Senior	74	68	73	44	None	None	Bronze	Bronze	yes	Nov-13	2
Woodcote High	68	69	82	74	None	None	None	None	no	Jan-15	2

Figure 6.2 Key Stage 4 Performance Table

Appendix E: Recommendations Outline

<u>Going for Bronze: Step-by-step guide</u>

The following document was produced by a group of American students from Worcester Polytechnic Institute. This document contains recommendations for additions for the creation of a step-by-step guide that is to be produced by Mr. Lewis Campbell.

- **Council Support**
  - Resources provided by the council
    - Bike Training
    - Programs
    - Annual Workshops
    - Funds
    - Road Safety Evaluations
  - **Contacts – Place in appendix**
    - This section would point readers to members of the council who can help with specific issue
- **School Recommendations**

  <u>Description:</u> This section is to provide schools with basic initiatives that they can implement in their schools like Walk on Wednesdays and Big Pedal.

  - Initiatives
    - Identify what is in place
    - See Matrix provided by Lewis
  - Road safety plans
    - Student made signs
    - JRSOs
  - Assemblies
    - How to organize a theatre performance
    - Ways the Council can help
    - Benefits
- **Becoming a School Travel Champion**

  <u>Description:</u> This section will be to help School Travel Champions understand their new role and help them understand what their duties are as such.
  - What is a School Travel Champion?
    - Leader within the school
    - In charge of School Travel Plans
    - Communicates with Council
  - What is their role?
    - Engaging students

- - Setup Initiatives
    - Record on STARS
    - Road safety
    - Maintaining STP
    - Contacting Council
- **Ofsted**

  Description: This section is to show the correlation of Ofsted and School Travel Plans. However, remind them that School Travel Plans is important but that this section is to help support schools struggling with inspections and at the same time promote STPs

  - Correlation with School Travel Plans
    - Leadership
    - Health and wellness
    - Child safety
    - Achievements
- **Benefits**

  Description: This section notes the primary benefits of having a School Travel Plan.
  - Healthy Children
  - Applying for building planning
  - Environment
  - Reputation
  - Develop life skills

Appendix F: School Travel Newsletter: Hackney

School Travel news

News and Information from Hackney Council's Sustainable Transport and Engagement team

National Walking Month is here!

Strider at a walk to school assembly at St John of Jerusalem Primary School.

Students enjoying their walkers breakfast at St John the Baptist School.

City Academy Youth Travel Ambassadors lead by example as they start their walking pledge campaign.

Every May we encourage people to take to their feet and feel the benefits of walking and this year is no exception. On Wednesday 13 May we want everyone to get walking!

Wednesday 13 May is going to be a massive walking promo day in Hackney, with freebies and discounts being offered by businesses to reward you for walking. You could pick up a free coffee, discounted breakfast, or goodie bag on your way to work if you walk that day! We will be sending out information about places taking part very soon so you can spread the word.

Win prizes!

Calling all schools – get involved, create a buzz at your school, win cool prizes

On Wednesday 13 May prizes will be awarded for:

- The best walking school on the day! Take a quick hand-count at the school and tell us how many pupils / staff walked to school at **movegreener@hackney.gov.uk;**
- Travel Tracker schools – be sure to log your journeys on 13 May! Top prize for the highest percentage walking, plus spot prizes for pupils who record a walking journey on the day;
- £200 walkers breakfast grants – limited availability – ask us for a grant to treat your walkers on 13 May, email **sta@hackney.gov.uk.**

Email any requests to **sta@hackney.gov.uk** by Thursday 30 April.

Don't forget to look out for Strider who will be out and about all day. Tweet us a photo if you see him **@greenerhackney**

Hackney WOW badge competition winners announced!

Last year we had a Hackney winner in Living Streets' National WOW Badge Competition. Can we do it again this year? We've had loads of creative entries from Hackney primary schools on this year's theme of "Our healthy planet" and have chosen our favourites, but do we have another entry that can WOW the judges at Living Streets?

Hackney winners:

1. Beatrice Franks, age 11 from Colvestone Primary School – Wind Turbine.
2. Tajala Ali, age 11 from Jubilee Primary School – Yoga tree.
3. Robin Jacobs, age 7 from Grazebrook Primary School – Exercising Earth.

All Hackney winners will receive active travel-themed goodie packs for their health inspired designs and we'll announce the national competition winners in the summer!

Badge designs by the three Hackney winners!

Last year's winning badge designed by Honor Maskett from St John of Jerusalem School.

April 2015

Co-funded by the Intelligent Energy Europe Programme of the European Union

Hackney

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STARS Europe update

Youth Travel Ambassadors cash in at Campaign Junction!

Youth Travel Ambassadors (YTAs) from The City Academy, Our Lady's Convent High School, Tawhid Boys School and Stormont House School all showcased their STARS project ideas at a "Campaign Junction" event on Wednesday 28 January at the Arcola Theatre in Dalston. The YTAs had to persuade a panel of judges, all experts in sustainable transport and behaviour change,

that their campaigns to encourage more walking and cycling were worth investments of up to £300.

The YTAs all did really well under pressure and were rewarded with the funding they wanted, as well as valuable feedback from the judges to help them with their campaigns. Well done to all the schools who took part!

Tawhid Boys School YTAs get £300 towards their whole school cycling event.

Secondary schools launch active travel campaigns

The Youth Travel Ambassadors are working hard planning and promoting their STARS campaigns which will run throughout April and May with the aim of increasing walking and cycling in the schools.

Projects include a walking campaign run by the City Academy where YTAs are asking students to pledge to walk at least once a week, active travel events days at Stormont House and Tawhid Boys School who both want students to find out how fun cycling can be,

YTAs from The City Academy at Campaign Junction with the judges.

and an incentives scheme at Our Lady's Convent High School who believe that active travel should be rewarded.

Other YTA schools will be putting on fun and active challenges for students to encourage them to try something new, win prizes and re-evaluate the way they travel. Good luck to all the YTAs with their projects!

See what our European partners have been up to on **starseurope. org/news** or follow STARS EU on twitter: **twitter.com/ STARSEuropeOrg**

STARS Accreditation

It's time to apply for STARS accreditation! Don't miss out this summer – get your school recognised for the great work you've done this year by completing your annual School Travel Plan review and logging the evidence of your initiatives on STARS online: **www.tfl. gov.uk/stars**

Need some help? Contact us now to book your review meeting. We're also running a website training workshop on **Wednesday 6 May (10am-3pm) at Keltan House** to get you familiarised with the TfL STARS website and help you complete your STP. Book now if you would like to join us – email **sta@ hackney.gov.uk**

Remember supply cover is available for completing STP reviews, £180 per day.

The deadline for Hackney schools to apply for STARS accreditation is **Friday 5 June**.

Accreditation checklist:

By 27 March	Apply for grant to help make action plan a reality	X
Between now and June	add evidence of your initiatives to www.tfl.gov.uk/stars (photos, documents etc)	
June	Get accreditation. Pay day! Cash in the results of your hard work	

All change!

As the summer term progresses there will be a big focus on year six pupils leaving to move on to secondary school. A lot of children will start travelling independently for the first time and it's very important that we give students the right advice and education on how to do this sustainably and safely.

We will be providing guidance booklets to all year 6 students and their parents full of information about travelling to secondary school, and to help get all students ready for the summer Junior Road Safety Officers will be leading campaigns and assemblies about playing, cycling and scooter safety.

Road Safety update

School Keep Clear – Primary schools please look out for a letter from Jo Roach and the JRSOs are starting to work on the second stage of the School Keep Clear Campaign. They are monitoring parking and stopping on the school keep clear markings and handing out educational materials explaining why it is dangerous to park on these markings and asking the culprits to sign a parking promise stating that they won't do this in future.

20's Plenty poster and slogan competition – The competition is now closed and we are very pleased to announce that Millfields Community School won first prize of a theatre in education play! We received fantastic entries from a large number of primary schools and a selection of our favourite entries will be used for flagpole banners around Hackney to encourage drivers to keep to the new 20mph speed limit on borough roads. Thank you to everyone who took part!

If you would like more details on these campaigns please contact: **Harry.Tipple@Hackney.gov.uk**

Students ask drivers to please keep clear.
Inse: One of the 20s plenty designs from Millfields School.

Kingsmead win the Golden Shoe

Well done to Kingsmead Primary School who are winners of the Spring term Golden Shoe trophy! This is for achieving consistently high walking levels with over 80% of pupils earning a badge each month, being top for WOW reporting, and sending us some brilliant entries for the WOW badge design competition. Congratulations Kingsmead!
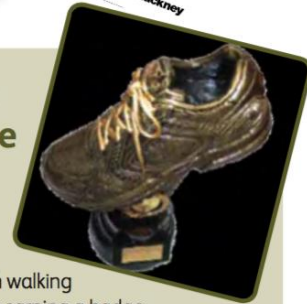
To get your pupils walking to school – join WOW, email **sta@hackney.gov.uk**. 25 Hackney primary schools are now receiving the free resources and incentives.

Bike Around the Borough – registration open!

Join us for the largest Bike Around the Borough and a world record attempt on Thursday 18 June. Last year 533 pupils and teachers from 26 schools took to Hackney roads for the ride, this year we're calling all schools to join this fantastic event to help us break the record. Register now, **email sta@hackney.gov.uk**

BATB 2014.

Book your Summer Bikers' Breakfast

Summer term Bikers' Breakfast dates are now being offered. Bike mechanics will help fix any small problems, and we will give you a grant to buy healthy snacks for your cyclists. Help your pupils, parents, and staff to get their bikes tuned up and roadworthy in time for Bike Around the Borough!

To book, email **sta@hackney.gov.uk** with your preferred dates **between 18 May and 17 June**.

21 schools hosted an event during March 2015, with early feedback from 10 of these events reporting that a total of 159 bikes were tuned up and made roadworthy!

'Gromit' tuning up Max's bike at Haggerston School.

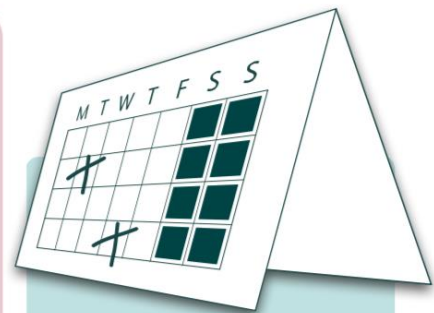## Tickets for **Hackney cycling conference** now available

The Hackney cycling conference is back on Friday 5 June 2015.

Last year's conference was a sell-out success and this year's will be even better, with a line-up of international and local speakers, including Andy Clarke, President of the League of American Bicyclists.

We are offering the first 10 school travel champions who sign up a special free ticket, after which they'll be charged at £25. Get in quick if you want a free place! Email **sta@ hackney.gov.uk** and quote "Sign me up for the Cycling Conference!"

Hackney Cycling Conference 2014, Klaus Bondam of the Danish Cyclist Federation delivers keynote presentation.

Annual Travel Surveys

Thank you to all schools who sent us mode of travel surveys last term.

STARS Europe schools – we will need your follow up mode of travel surveys by **Friday 29 May**. Please complete these following our guidance on **www. hackney.gov.uk/stp-downloads**

Would you like a postcode plot map for your school? These large colour printed maps are great to display, and highlight where car journeys can be cut. Request your map via **sta@hackney.gov.uk**.

ⓘ Contact Us

For more info about walking and cycling to school, or to book an STP review please contact: **sta@hackney.gov.uk** or call **020 8356 8469**

Visit **www.hackney.gov.uk/stp** for useful STP info and templates.

To update your school's STP log in to **www.tfl.gov.uk/stars**

Key dates for 2015

- ◆ Global Road Safety Week – **4 – 8 May**
- ◆ Walk to School / Work Week – **11 – 15 May**
- ◆ STARS Europe schools second surveys – **Friday 29 May**
- ◆ STARS accreditation deadline – **Friday 5 June**
- ◆ Summer Bikers' Breakfasts – **18 May – 17 June**
- ◆ Bike Around the Borough – **Thursday 18 June**

Bike Around the Borough 2014.