



**Children's travel to school –  
are we moving in the right  
direction?**

## KEY FINDINGS

National surveys show that while the level of walking to school remains high, there has been a trend toward greater car use and less walking over the last twenty years.

Younger pupils are more likely to walk but also more likely to be driven than their older counterparts, while older pupils are more likely to take the bus than younger pupils.

There are marked local variations in levels of active travel (principally walking and cycling to school) although levels of active travel vary only slightly between local authorities, variations between schools within most authorities are much greater.

There are examples of schools that have relatively high levels of active travel despite pupils travelling a longer than average distance to school. The levels of affluence and deprivation within school catchment areas also have an influence on active travel levels, but the relationship is not straightforward or linear.

There is no evidence from Glasgow that schools with travel plans have higher levels of active travel than schools without such plans, although further research on the impact of travel plans is needed.

While levels of cycling to school are low – just over 2% nationally – there is evidence from Glasgow that ten times as many secondary pupils would like to cycle as do cycle currently.

Although there have been reductions in overall child road casualty rates, rates remain consistently higher in Glasgow than in other authorities.

Child road casualty rates in the most deprived areas of Glasgow and Clyde Valley remain stubbornly high in comparison to the most affluent areas. Child pedestrian casualties have reduced across the board but rates in the most deprived areas remain more than four times those in the most affluent areas.

## INTRODUCTION

Improving physical activity and developing sustainable transport are high on political and public health agendas, globally, nationally and locally. The Scottish Government promotes active travel and regards increased walking and cycling as a way *'to ease congestion, reduce noise pollution, cut exhaust emissions and improve our health'*<sup>1</sup>.

The Government provides funding to local authorities for walking, cycling, and 'safer streets' projects and to Sustrans for promotion and infrastructure at schools. Many schools have, or are working on, school travel plans and £1 million was rolled-up into the local authority block grant in 2008/09 to employ school travel co-ordinators in local authorities across Scotland to support and encourage safe and active travel to school<sup>1</sup>. The Scottish Government also funds Sustrans' Safe Routes to Schools Team<sup>i</sup>, which promotes active travel to school<sup>2</sup>.

Despite these efforts there is little evidence that trends in active travel to school are moving in the right direction. For example, the results from Sustrans' Hands Up survey<sup>ii</sup> in 2009 showed a slight decrease (nationally) in the proportion of children who travelled to school actively (walking, cycling or using a scooter or skate board), 49.9% compared to 51.8% in 2008<sup>3</sup>. Research suggests there are a range of barriers to active travel to school including personal safety, weather conditions, time/distance and to a lesser extent, image, physical discomfort and aspects of the physical environment<sup>4</sup>.

<sup>i</sup> [www.sustrans.org.uk/what-we-do/safe-routes-to-schools](http://www.sustrans.org.uk/what-we-do/safe-routes-to-schools)

<sup>ii</sup> The Hands Up survey is a new national survey first conducted in September 2008 by Sustrans (the UK sustainable transport charity). It is designed to cover all schools, both primaries and secondaries (as well as the independent sector), although not all local authorities and not all schools take part - in 2009 more than 415,000 children (approximately 59 per cent of all pupils in Scotland) took part.

In recognition of the importance of active, sustainable travel to public health, the Glasgow Centre for Population Health (GCPH) established a new research programme in 2008 – “Moving in the right direction?” – to build a better information base, develop knowledge and understanding, and evaluate the impact of transport policies and initiatives on active, sustainable travel in Glasgow and the Clyde Valley region.

The programme has three main strands: a baseline quantitative analysis of existing data sources; qualitative research exploring travel patterns and attitudes towards active travel in and around Glasgow<sup>5</sup>; and a review of the impact of Scottish national, regional and local strategy and policy on levels of active, sustainable travel<sup>6</sup>. This briefing paper summarises the main findings of our analysis of children’s travel in the region and draws on a longer, more detailed report which will be made available on the GCPH website. A related briefing paper has also been produced summarising findings from an analysis of adult travel in the region<sup>7</sup>. All the reports from this programme can be accessed via the GCPH site at [www.gcph.co.uk/healthysustainabletransport](http://www.gcph.co.uk/healthysustainabletransport)

## AIMS & PURPOSE

The overall aim is to provide baseline data on active travel in the Glasgow and Clyde Valley region that can be updated and monitored over time. The analysis of children’s data is a sub-component of this work. The aim has been to present trends and illustrate patterns of travel at a local authority level and, where data allow, at a more local level.

## DEFINITIONS AND GEOGRAPHIES

We have used the term, ‘active travel’, principally to refer to walking or cycling. However, with some survey sources a slightly wider definition has been used. For example, in relation to travel to school data, using a ‘skate/scooter’ and ‘park and stride’ were included.

The main focus of the analysis was on travel within the Glasgow and Clyde Valley area. This includes eight local authorities: East Dunbartonshire, West Dunbartonshire, East Renfrewshire, Renfrewshire, Glasgow City, Inverclyde, North Lanarkshire and South Lanarkshire. Most of the analyses are presented for these local authorities or for the whole Glasgow and Clyde Valley area. However, we have also drawn on national data to illustrate Scottish travel trends and have carried out analyses at a school level.

The term ‘deprivation decile’ is used to represent 10% of a population with a particular level of deprivation. Thus, the most deprived decile equates to the most deprived 10% within a population, while the least deprived decile represents the 10% of a population living in the least deprived circumstances. Similarly, the term ‘deprivation quintile’ is used to refer to 20% of a population with a particular level of deprivation.

Finally, the term ‘child road casualties’ refers to children injured in road traffic accidents as pedestrians, cyclists or passengers in cars or other road vehicles.

## METHODS AND SOURCES

This study has been based mainly on secondary analysis of a range of Scottish and UK data sources, including surveys, administrative data and published reports. Survey sampling methodologies and data recording processes for the majority of these data are widely reported and can be accessed at relevant web sites. Table 1 outlines the sources used and web sites or publications from which more information can be sought.

**Table 1** List of data sources

Data sources	Links to publications
Scottish Household Survey	<a href="http://www.scotland.gov.uk/Topics/Statistics/16002">www.scotland.gov.uk/Topics/Statistics/16002</a>
Scottish Transport Statistics	<a href="http://www.scotland.gov.uk/News/Releases/2009/12/21103917">www.scotland.gov.uk/News/Releases/2009/12/21103917</a>
Sustrans Hands Up Survey	<a href="http://www.sustrans.org.uk/about-sustrans/media/news-release/Hands-Up-Survey">www.sustrans.org.uk/about-sustrans/media/news-release/Hands-Up-Survey</a>
Injury Road Accidents (STATS 19 police data)	<a href="http://www.scotland.gov.uk/Publications/2009/11/23103624/0">www.scotland.gov.uk/Publications/2009/11/23103624/0</a>
Hospital admissions for accidents (SMR1)	<a href="http://www.isdscotland.org/isd/4430.html">www.isdscotland.org/isd/4430.html</a>
<b>Local sources</b>	
Health and Wellbeing of S1–S4 pupils in New Learning Community Schools in Glasgow City	<a href="http://www.phru.net/rande/Schools%20Survey%20%20Schools%20Reports/Forms/Shared%20Documents%20Custom%20View.aspx">www.phru.net/rande/Schools%20Survey%20%20Schools%20Reports/Forms/Shared%20Documents%20Custom%20View.aspx</a>

In addition, in order to carry out more detailed analysis of travel to school, we linked the Hands Up Survey data (2008) at a school level within Glasgow and Clyde Valley to information from the annual schools census (August 2008). The data added through this linkage enabled analysis of the impact on active travel of deprivation, distance to school, ethnic profile of school and type of school (denominational/non-denominational).

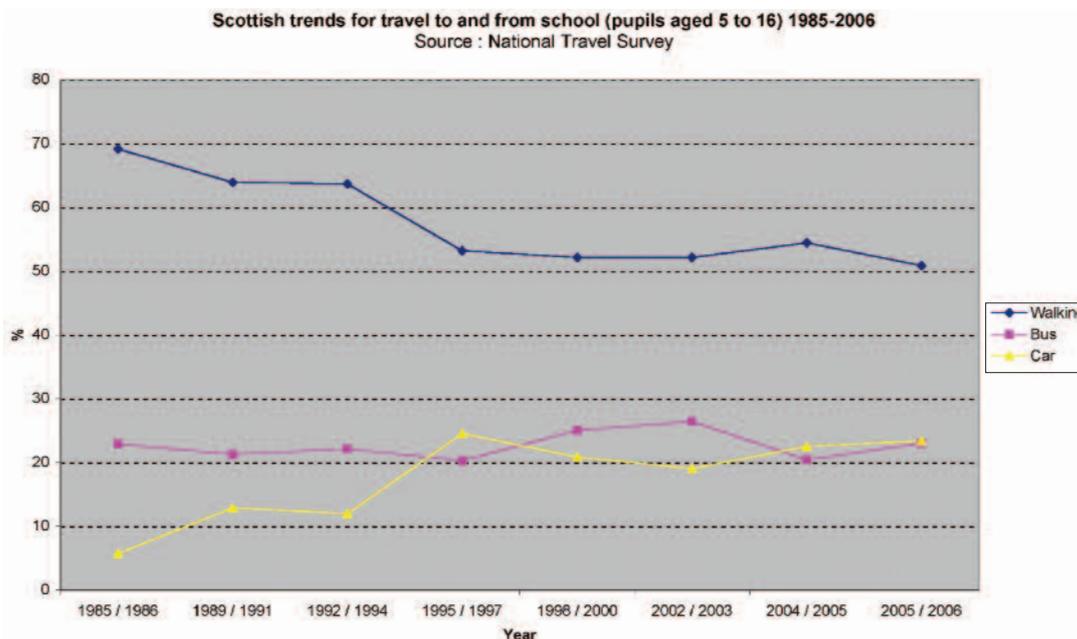
FINDINGS

The results are broken down into four main sections: overall trends and patterns in children's travel to school, travel choices, findings from detailed analysis of Hands Up Survey data and trends in child road casualty rates.

**Overall trends and patterns in children's travel to school**

Since the mid eighties, travel to school trends in Scotland have shown an increase in the percentages of pupils being driven to school with a similar decrease in the numbers of pupils walking (Figure 1). Nationally, levels of cycling to school are very low (2.3% in 2009; 2.8% in 2008)<sup>3</sup>.

Figure 1.



In Glasgow and Clyde Valley, and in Scotland, younger pupils are more likely to walk but also more likely to be driven than their older counterparts, while older pupils are more likely to take the bus than younger pupils.

Children from more affluent areas are more likely to be driven to school than those from more deprived areas, while in general, the proportion of children walking to school is highest in the most deprived quintile and reduces as affluence increases, with the exception of children from the least deprived quintile where the percentage of children walking is quite high.

Levels of walking to school diminish, and the proportion being driven to school rises, as household income increases.

**Travel choices<sup>iii</sup>**

Pupils choose to walk to school because it is “not too far away” or the “most convenient” way to get there; only a small proportion walk because it is good exercise. While a small proportion of those cycling to school choose to do so because it is good exercise, the largest proportions do so because it is the quickest method of getting to school and/or the most convenient method.

<sup>iii</sup> Findings based on analysis of Scottish Household Survey (2005/06)

Half of pupils driving or being driven view the car as the most convenient method of getting to school. A smaller proportion of those driving or being driven consider the car to be the quickest method and nearly a fifth perceive travelling by car to school to be the safest method. Over half of those who use buses do so because of convenience.

Reasons given for not using public transport were inconvenience, lack of a service, a preference to use a car, and that children were too young to travel on their own to school.

The Glasgow Schools' Health and Wellbeing survey, conducted in 2007, provides an interesting comparison between how secondary pupils get to school and how they would prefer to travel to school. Given the choice, more pupils would prefer to travel to school by car and many fewer would use the bus, although walking would still be the most common way of getting to school. It is notable that while less than one in a hundred pupils currently cycle to school, ten in a hundred would prefer to cycle.

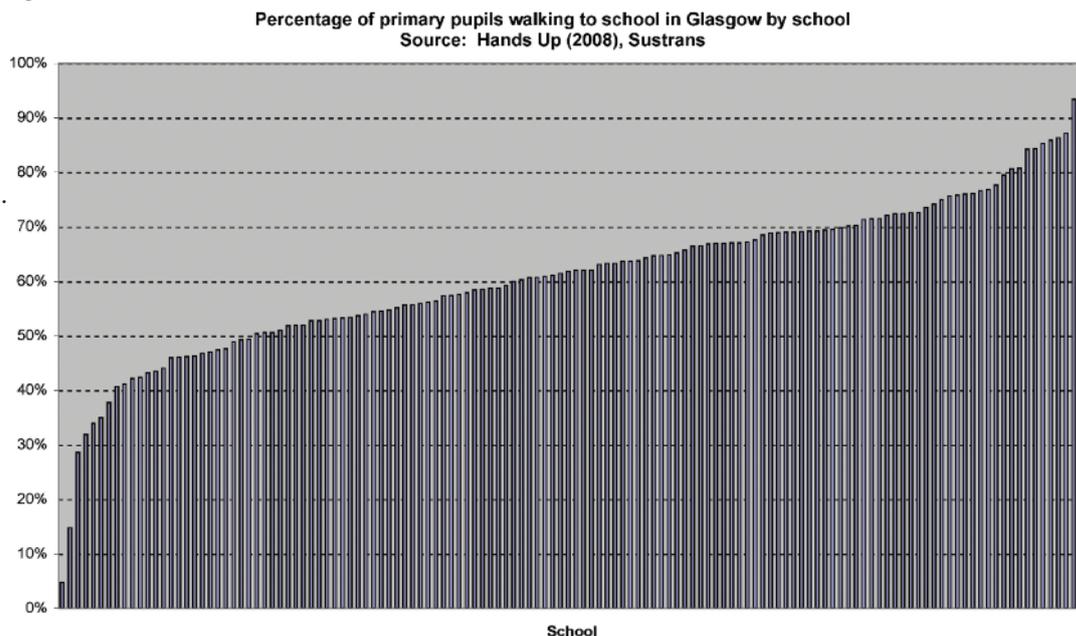
### Analysis of Hands Up Data (2008) in Glasgow and Clyde Valley

#### Primary Schools

Two-thirds of primary school pupils in the Glasgow and Clyde Valley Region use an active method to get to school, while a further quarter are driven to school and around one in ten use public transport. The proportion of pupils being driven to school in the region is relatively high compared with the picture in Scotland as a whole. Renfrewshire is the only authority in which the proportion of pupils being driven to school is lower than the Scottish average.

There are wide variations in levels of active travel between primary schools within each local authority. For example, in Glasgow in one primary school less than 5% of children walk to school, while at the other extreme in one school 96% of pupils walk to school (Figure 2).

**Figure 2.**



The percentage of pupils cycling to school is low (1.3% of all pupils in Glasgow and Clyde Valley, 2008) although some schools appear to have been more successful. There are schools in several authorities where over 10% of pupils cycle to school.

As distance from home to primary school increases, the proportion of pupils travelling actively to school reduces, but there are examples of schools that buck this trend where

the prevalence of active travel is high despite the average distance to school that pupils travel being greater.

Levels of active travel compared by deprivation display a 'U-shaped' distribution: active travel is high among pupils in the most deprived areas and rates of active travel reduce with decreasing deprivation but then rise again in the least deprived schools.

The proportion of pupils from black and minority ethnic groups within schools is not associated with differences in levels of active travel. However, active travel prevalence on average is lower in denominational primary schools compared to non-denominational schools, but this difference is much less than the variation in levels of active travel among denominational primary schools, which ranges from 33% to 85% in Glasgow.

There are over 50 primary schools with a travel plan in Glasgow. There is no overall difference in active travel levels between schools with travel plans and those without travel plans. However, the current analysis has not been able to assess the impact on active travel of travel plans before and after implementation.

### Secondary Schools

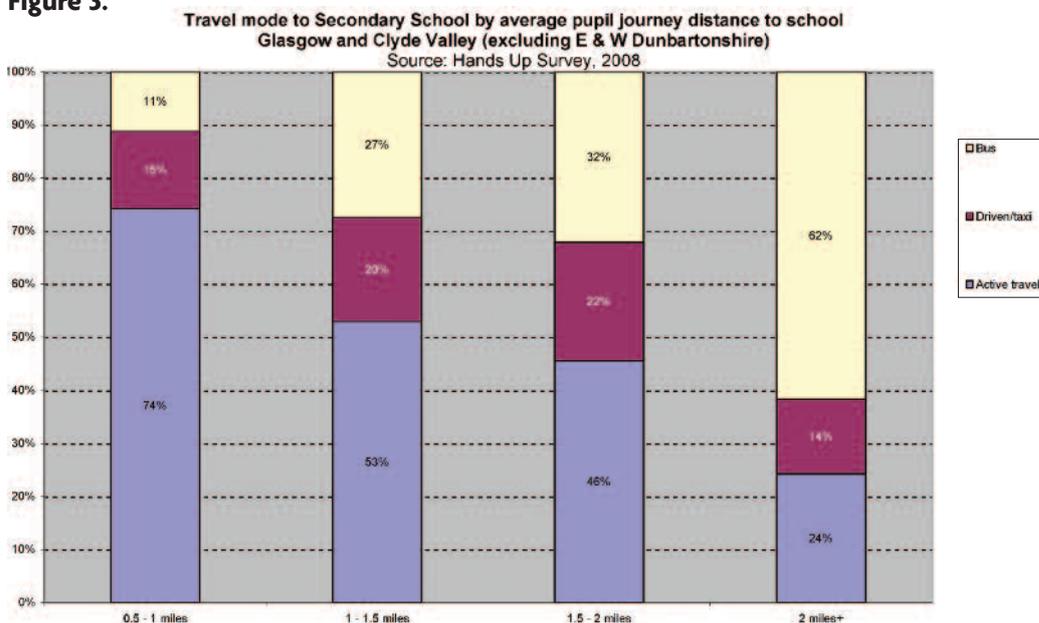
Active travel is at a broadly similar level in secondary schools across most of the local authorities (46.1% across the region), slightly below the Scottish average (48.2%), with the exception of South Lanarkshire where the levels are lower (39.4%).

In comparison to Scotland, the proportion of secondary pupils travelling to school by car in the Glasgow and Clyde Valley region is higher in all the local authorities except South Lanarkshire, where nearly 50% of pupils use public transport.

As with primary schools, there are large variations in levels of active travel across the secondary schools in each authority. For example, in Renfrewshire, levels of active travel to secondary school range from 22% to 82%.

Walking is by far the most popular method of active travel for secondary school pupils with more than 40% of pupils walking to school in over half the schools. Levels of cycling to school are very low for most schools. In only seven schools out of 44 do more than 1% of pupils cycle.

Figure 3.



Bus use is the second most popular mode of travel to school in the region with one third of pupils using a bus, although across the region there is a large variation between schools in levels of bus travel (ranging from 74.4% of pupils to 4.1%).

Distance is an important determinant of whether secondary pupils travel actively to school. Three quarters of pupils with a journey of a mile or less (on average) walk, cycle or skate to school. In contrast where the average distance to school is over two miles, less than a quarter of pupils travel actively.

There is no clear pattern by deprivation regarding levels of active travel in secondary schools. Levels of active travel are generally lower in more rural areas; almost half of pupils walk, cycle or skate to school in large urban areas while in remote and rural areas only one in five pupils travel actively.

More pupils in non-denominational schools in the region travel actively to school than pupils in denominational schools (52% vs. 33%) and distance to school does not explain this – the average distance to school for pupils at non-denominational schools was slightly greater than for denominational schools.

#### Trends in child road casualty rates<sup>iv</sup>

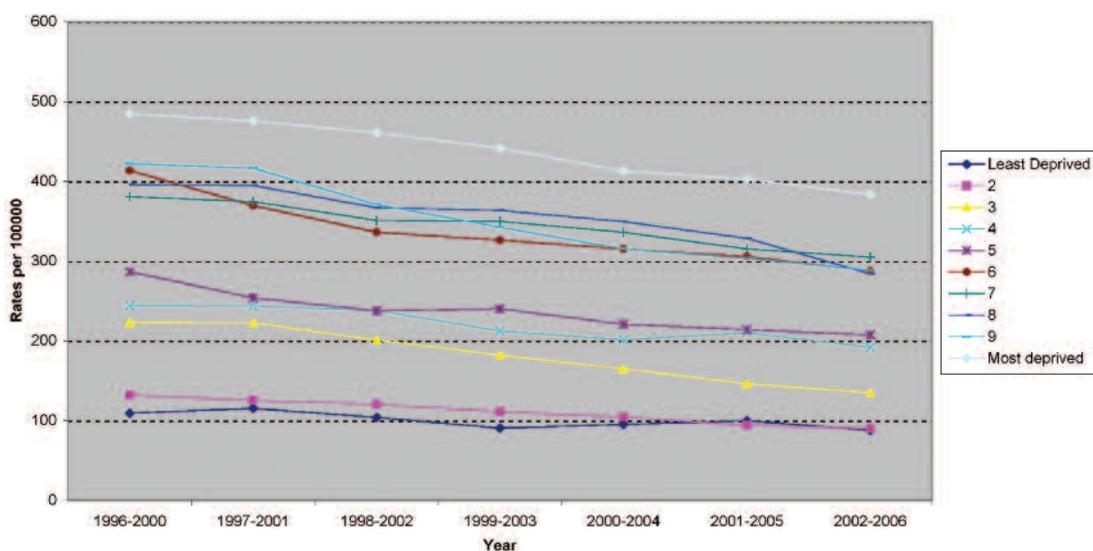
There has been a general downward trend in child road casualty rates over the last 25 years although differences between local authorities persist. Child road casualty rates have been consistently higher in Glasgow than in other authorities. East Renfrewshire and East Dunbartonshire have consistently had the lowest rates of child road casualties in the region.

Around a quarter of road traffic injuries involving children happen on the journey to and from school. A higher percentage of older children (10-15 years) are injured compared to younger children (5-9 years). Boys are more likely to be injured than girls at all ages.

With regard to major casualties, trends in child fatalities and serious injuries have reduced over a long period but differences between authorities in the Glasgow and Clyde Valley region remain. Over the last 15 years, Glasgow stands out as having the highest rates of serious casualties, while East Renfrewshire has had the lowest.

Figure 4.

Rates of pedestrian child casualties (5-15 year olds) by deprivation, Glasgow and Clyde Valley, 1996-2000 to 2002-2006  
Source: Police Statistics 19



<sup>iv</sup> Analysis based on STATS 19 data recorded by the police and SMR01 hospital admission data.

While overall child road casualty rates have dropped in all deprivation deciles, rates in the most deprived areas remain stubbornly high in comparison to the most affluent areas. Child pedestrian casualties have also reduced but rates in the most deprived areas are more than four times higher than rates in more affluent areas (Figure 4). Looking at Glasgow specifically, it is clear that the most affluent areas have significantly lower rates of child casualties than more deprived areas.

There has been a downward trend in child road casualties (and pedestrian casualties) *admitted to hospital* over the period of 1996-2008 across all authorities. Glasgow has the highest rates of child pedestrian casualties admitted to hospital.

In line with the Scottish trend, the greatest reductions in child road casualty admissions in Glasgow and Clyde Valley have been in the most deprived quintiles while there has been no significant change in the child pedestrian casualty admission rates in the least deprived areas.

Rates of child cyclist casualties admitted to hospital are much lower than pedestrian casualties, but have reduced nationally over the last decade. As with other modes, the casualty rate is highest in the most deprived quintile.

Nationally, casualty admission rates for child car occupants have remained fairly stable over the last decade and there is very little sign of a pattern by deprivation, with the exception of the most affluent quintiles which have consistently had the lowest rates of child car occupant casualties.

## CONCLUSION

National trends in school travel are clearly concerning – there is no sign of increasing levels of active travel amongst primary or secondary pupils despite national, regional and local strategies and policies emphasising the importance of safe and active school travel. While levels of walking to school remain high, particularly in primary schools, the trend over the last 20 years has been toward greater car use and less walking.

Local data on active travel among children is relatively scarce so the annual Sustrans ‘Hands Up’ survey is a valuable new resource. Analysis of the 2008 survey data provides an illuminating insight into the marked local variations in levels of active travel to school between schools.

Our analysis suggests that distance to school and the degree of affluence/deprivation of school catchment areas are likely to influence active travel. Other factors such as infrastructure and support for active travel within schools and from parents are also likely to be influential. There will certainly be important insights to be gained from schools achieving the higher levels of active travel.

It is notable that there is no evidence from Glasgow that schools with travel plans have higher levels of active travel, although this is based on a limited observational analysis. On a positive note, evidence from one Glasgow survey suggests that there is an appetite among secondary pupils for greater opportunities to cycle.

Despite reductions, the high rates of child road casualties – particularly pedestrian casualties – and the much higher rates of casualties in deprived areas, remain a cause for concern.

### FURTHER WORK

Physical infrastructure, traffic levels, school facilities, and teacher and parent support for active travel are all likely to influence the level of active travel in a school, but we have little evidence (other than anecdotal evidence) on the relative importance of these factors in the region. Further research to understand the factors that stimulate and support active travel could yield valuable insights, particularly in those schools that have achieved high levels of active travel despite relatively long commuting distances for pupils. We intend to conduct further research using the Hands Up data for 2009 linked to school census data to understand the factors that underlie school variations in active travel across the whole of the Glasgow and Clyde Valley region. Additionally, further insight in the impact of travel plans could be gained from comparing levels of active travel before and after implementation of travel plans.

### ACKNOWLEDGEMENTS

Much of the data we have used has come from Scottish Government surveys and sources. We would like to thank Sustrans for making the Hands Up survey data available to us. We would also like to thank members of the Active Travel advisory group for their contributions to this work in terms of advice and data.

### FURTHER INFORMATION

This briefing is based on a longer report, *Active travel – are we moving in the right direction?*, written by Mark Livingston (Urban Studies, University of Glasgow) and Bruce Whyte (GCPH). This longer report and all the other reports from this programme can be accessed via the GCPH site at [www.gcph.co.uk/healthysustainabletransport](http://www.gcph.co.uk/healthysustainabletransport)

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