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## **Achieving safer school travel in the UK**

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### **1. Introduction**

This paper summarises the current UK approach to improving child road safety, focusing particularly on measures to enhance the safety of the school journey. It highlights the importance of a safe road environment, and a number of different ways in which this can be achieved, including engineering measures, often introduced via partnership work between local authorities, schools, the police, the local community, parents and children. It also reports on supporting measures, such as on-road child pedestrian and cycle training, which are becoming an increasingly common part of school activity.

### **2. National road safety priorities**

#### **2.1 National road safety strategy**

In March 2000, the UK Government launched a new road safety strategy<sup>1</sup>, with targets and measures for improving road safety across Britain. Children's road safety was identified as one priority, and the strategy established a target to achieve a 50% reduction in the number of children killed or seriously injured (KSI) in road traffic accidents by 2010, compared with the 1994-1998 average.

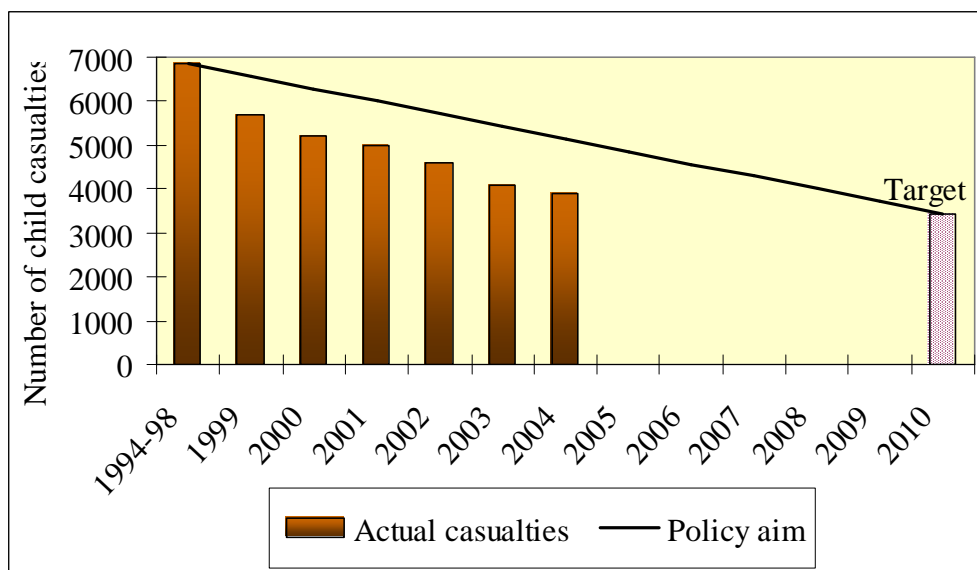
#### **2.2 Current progress in improving child road safety**

Figure 1 shows current progress towards achieving the child road safety target. It highlights that the national road safety strategy has been very successful so far. The number of killed and seriously injured children has already reduced by 43% (compared with 1994-98), and the target reduction of 50% is likely to be achieved significantly earlier than 2010.

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**Figure 1: Changes in child casualties (KSI) and policy targets<sup>ii</sup>**



According to a three year review of the strategy<sup>2</sup>, the key measures which account for the improvement are as follows:

- Requiring local authorities to conduct child road safety audits<sup>iii</sup>, and introducing new training for road safety staff.
- Encouraging the adoption of more 20mph zones (i.e. areas where the speed limit is 20 miles per hour, equivalent to about 30kph), safer crossings and 'home zones'<sup>iv</sup>.
- Promoting more road safety training for child pedestrians and cyclists, including new guidelines and resources.
- Standardising child restraint fittings in cars, and generally promoting their use, together with the use of cycle helmets
- Focusing on improving conditions in deprived areas, and for the school journey.

However, whilst the current progress on child road safety is impressive, there are still concerns about the safety of particular modes of travel for children. Figure 2 shows some data from a recent report examining the performance of different OECD countries (i.e. the countries of the Organisation for Economic Co-operation and Development)<sup>3</sup>. This compared road traffic accident fatality rates for children by mode for different countries (using averaged rates for all years of data that were available between 1996 and 2000 from the International Road Traffic Accident Database).

<sup>ii</sup> Data from Department for Transport (annual) 'Road casualties in Great Britain', DfT, London.

<sup>iii</sup> Undertaking a 'child road safety audit' involves the authority identifying the child road safety problems in its area, implementing strategies to deal with those problems, and subsequently measuring the success of its initiatives.

<sup>iv</sup> Home zones are residential areas where the speed limit is reduced to 10mph and the road environment is altered to give greater priority to non-vehicular traffic.

**Figure 2: Children's road safety in the UK, compared with other OECD countries.**

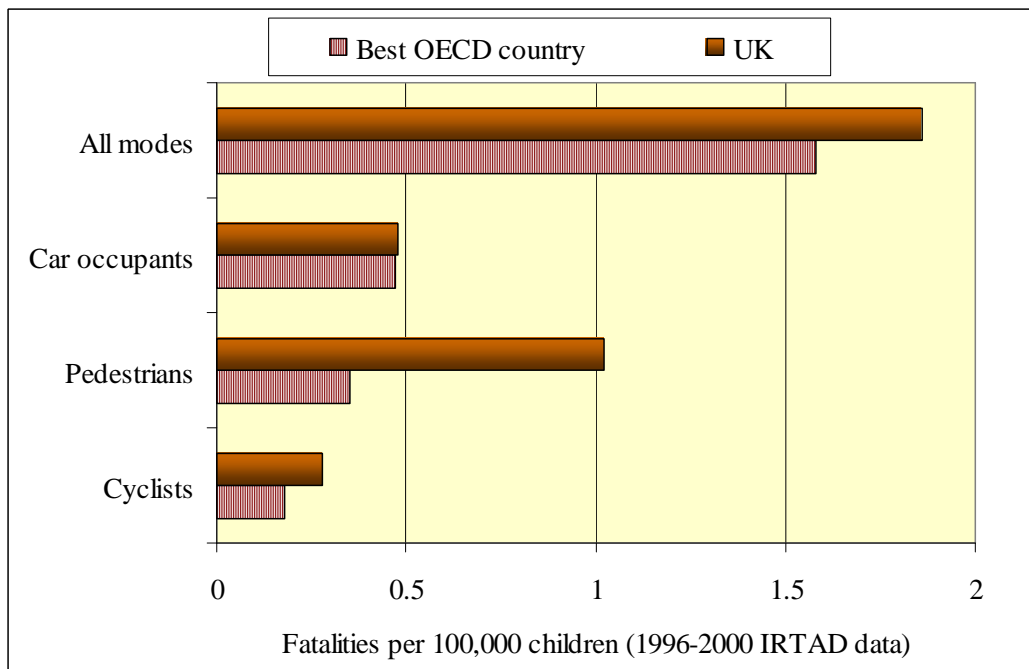


Figure 2 shows that, overall, the UK performs relatively well. At the time of the analysis, it had the third lowest level of fatalities per hundred thousand children of all the OECD countries (with only Sweden and Japan performing better). However, this particularly reflected its good safety record in relation to child car occupants. For child pedestrians and cyclists, its relative performance was less good, and this was highlighted when exposure was taken into account. Specifically, for 10-14-year-olds, road safety was analysed in relation to the amount of travel undertaken. This showed, for example, that, per kilometre walked, UK 10-14-year-olds were nearly 7 times more likely to be killed than 10-14-year-olds in Norway, and per kilometre cycled, more than 6 times more likely to be killed than 10-14-year-olds in the Netherlands<sup>v</sup>.

The OECD analysis was based on data collected prior to the implementation of the UK's latest road safety strategy (introduced in 2000). Updated analysis would undoubtedly show improvements in performance. For example, it is anecdotally reported that, for child pedestrian safety, in relation to other Western European countries, the UK has moved from being in the bottom third to being about average.

However, concerns remain. Improving child pedestrian safety is currently seen as the top priority, given that, on average, UK children generally walk far more than they cycle. However, there are national policy aspirations to increase the amount that children cycle. Hence, the safety of child cyclists is likely to be seen as an increasing priority, both as one facet of encouraging parents to let their children cycle more, and because the number of children cycling is likely to increase.

<sup>v</sup> Analysis was conducted on a small sub sample of countries which were able to provide information about the travel of 10-14-year-olds, namely Denmark, Norway, Sweden, the USA, New Zealand, Germany, the Netherlands, Hungary, Switzerland and the UK.

### **2.3 Improving child pedestrian safety**

As described above, improving child pedestrian safety has currently received the greatest attention. Notably, three separate reports have highlighted the importance of a safe physical environment. These reports are as follows.

#### **2.3.1 MVA, 1999 and 2004<sup>4</sup>**

The consultancy MVA completed two reports for the Department for Transport, comparing child pedestrian safety in the UK, France and the Netherlands. The first report, completed in 1999, concluded that more than half of the difference in child pedestrian casualty levels between the UK and the other countries was because UK children spent more time near or crossing major roads, roads with higher traffic flows and roads with higher speeds.

The follow-up work, completed in 2004, reinforced this conclusion. In particular, it highlighted that national differences in child exposure to busy roads were more marked for the school journey than when children were playing or visiting friends. It also estimated that 54% of school travel in the Netherlands took place in an environment with 'special measures' to slow traffic down, compared with only 19% in the UK.

#### **2.3.2 Grayling *et al*, 2002<sup>5</sup>**

Grayling *et al* examined the experience of introducing 20mph speed reduction zones in the UK City of Kingston-upon-Hull. Since 1994, Hull has introduced more than a hundred 20mph zones, and it has a significantly better record of road casualty reduction than the UK as a whole. Thirteen of the 20mph zones were implemented in 1996/7, and a comparison of the accident data for the area where these zones were introduced was carried out, for the three years before and the three years after the zones were introduced. This showed that the zones had cut child pedestrian injuries by 74% (from a three year total of 30 to 9), and all child injuries by 64% (from a three year total of 50 to 18).

#### **2.3.3 Christie *et al*, 2004<sup>3</sup>**

This study, (already cited) was conducted for the UK Department for Transport and the OECD Child Traffic Safety Expert Group. It included a questionnaire survey of the OECD countries, and analysis of the findings in relation to child fatality rates for different modes. In particular, the study aimed to identify the distinguishing characteristics of the top performers - i.e. features of policy or practice shared by at least four of the top five countries for child road safety for a particular mode, which were a less common feature of practice amongst less well performing countries.

For child pedestrian safety, the distinguishing characteristics identified included: the presence of speed reduction measures and signalised crossings in most local authorities or municipalities and outside many schools; the presence of outside play areas such as parks or playgrounds in most residential areas; national publicity campaigns aimed at child pedestrian safety; and legislation assuming driver responsibility for accidents involving child pedestrians in residential areas.

For example, Figure 3 shows the responses given by countries to the question: "In your country, how many schools have the following measures outside?", (where a list of 'following measures' included 'speed reduction measures' and '30-40 kph limits').

**Figure 3: Pedestrian fatality rates and the prevalence of particular measures outside schools for different OECD countries.**

Country	Pedestrian fatality rate*	Speed reduction measures	30-40kph limits
Sweden	0.35	MANY	MANY
Netherlands	0.44	MANY	MANY
Finland	0.67	MANY	MANY
Germany	0.69	FEW	MANY
Denmark	0.72	MANY	SOME
Canada	0.77	SOME	MOST
France	0.83	FEW	SOME
Norway	0.83	SOME	MANY
Australia	0.86	SOME	MOST
Iceland	0.92	MANY	MANY
USA	0.96	SOME	MANY
Spain	0.97	SOME	SOME
UK	1.02	FEW	FEW
Czech Republic	1.20	SOME	SOME
Hungary	1.21	FEW	FEW
Turkey	1.21	MOST	FEW
New Zealand	1.22	FEW	FEW
Switzerland	1.33	FEW	SOME
Poland	2.14	SOME	SOME
South Korea	5.41	MANY	MANY

\*Based on an average of 1996-2000 data from the International Road Traffic Accident Database.

In brief, then, in the UK, there is an increasing body of evidence indicating that a safe physical environment is critical to reducing child pedestrian casualties, and that making the school journey safer may be an important area to prioritise.

### 3. Focus on school travel

#### 3.1 Concerns about school travel

School travel is currently being given high priority in the UK. This is partly because of road safety concerns and the possibility to address problems in relatively focused locations. About 20% of child road traffic casualties occur on the school journey. School travel is also a focus for attention because there are a number of other, related concerns about changes in children's school travel habits, making it a policy priority to address for a number of different reasons.

Specifically, over the last 30 years, the proportion of British children being driven to school has risen dramatically. Between 1985/6 and 2004, the proportion of children (aged 5-16) travelling to school by car has nearly doubled, from 16% to 31%<sup>vi</sup>. There are significant concerns about both the resultant growth in general traffic, and, also, the concentrated traffic problems that arise at the school gates.

The change in travel habits has also been linked with growing concerns about children's health and well-being, given that there have been significant reductions in

<sup>vi</sup> Data taken from the Department for Transport's annual National Travel Survey.

the amount of physical activity that they typically undertake. Childhood obesity is increasing, with 2001 estimates for England suggesting that 8.5% of 6-year-olds and 15% of 15-year-olds are already obese<sup>vii</sup>. Encouraging more children to walk or cycle to school is seen as one way of starting to address the problem. (Clearly, changes in diet will be important too).

Finally, the increase in the number of children driven to school is seen as being linked to a number of other, negative outcomes - including, for example, a reduction in children's independence, a reduction in their opportunities to learn road safety skills, a missed opportunity to 'burn off energy' and chat to friends on the way to school, and, consequently, reduced readiness to learn when arriving at school.

### **3.2 National initiatives to address school travel**

As a result of the concerns described above, the school journey has become the focus for a national initiative by the Department for Transport and the Department for Education and Skills. Their approach concentrates on encouraging schools to adopt 'school travel plans'. School travel plans are strategies that are developed in partnership between local authorities and individual schools, to encourage and enable children travel to school safely by more sustainable means other than travelling alone in a private car.

In 2003, the Department for Transport and the Department for Education and Skills launched a joint action plan on travelling to school<sup>6</sup>. Key features of this plan included:

- A target for all schools to have travel plans in place by 2010,
- £50 million of new funding for school travel over 2 years, (equivalent to about W90 billion.)

Part of the new funding has been allocated to local authorities to appoint more local school travel advisers, and to regional authorities to appoint regional school travel advisers to oversee and direct school travel work at regional level. The other portion of the funding has been used to set up a system of capital grants (typically £5000 for a primary school and £10,000 for a secondary school, equivalent to W9million and W18million respectively). All schools with completed travel plan documents are eligible to receive these grants, to spend on capital measures.

In general, school travel advisers, located in local authorities, are expected to lead the delivery of school travel plans, working in partnership with individual schools. These school travel advisers typically draw on expertise from different parts of their local authority. For example, the local road safety department usually supplies pedestrian and cycle training to schools; the local highways department usually provides physical changes to the road environment (such as safer crossings); and the local education department administers the new capital grants scheme. Recent research<sup>7</sup> indicates that successful school travel plans typically involve a committed member of staff at the school, as well as the local authority facilitator (i.e. the school travel adviser), and that partnership work with the whole school community is important.

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<sup>vii</sup> Data taken from the Parliamentary Office of Science and Technology postnote no. 205.

### **3.3 Research on school travel**

The effectiveness of school travel work is currently being assessed in a new study for the Department for Transport, entitled 'Making school travel plans work'<sup>7</sup>. In this study, 30 schools have been identified that have undertaken school travel planning which is considered 'good practice'. The schools have been analysed in detail. The 23 local authorities associated with those schools have also been interviewed at length.

It should be noted that, currently, in the UK, modal shift is often taken as the key indicator as to whether school travel work is successful. Safety considerations are almost always 'built in' to school initiatives, but are not always measured (partly because the number of accidents near an individual school is often very small). Consequently, it is not usually possible to quantitatively report on how successful school travel plans have been at improving safety. However, as a qualitative measure, at 23 of the 30 schools studied, interviewees said that they thought parents would perceive travel to school had become safer since work on school travel had taken place.

The remainder of this paper reports on the range of initiatives that had been introduced at the case study schools which should (either directly or indirectly) have improved the safety of the school journey.

## **4. Measures to improve the safety of the school journey**

### **4.1 Engineering measures**

Engineering measures represent one of the main ways to improve safety on the school journey. They are also particularly valued because their effects are usually long-lasting. The 'Making school travel plans work' research found that they were often most effective when used in conjunction with some of the other measures discussed later in this paper. In particular, involving the school community in decisions about the type and location of measures implemented could help in maximising the benefits - both in terms of making sure that the right measures were put in the right places, and in terms of encouraging complementary behaviour, such as compliance with parking restrictions. Initially, local authority school travel work tended to focus on 'package approaches' (namely, 'school safety zones' and broader 'safer routes to schools' schemes). Now, there is a trend towards local authorities having additional programmes, whereby schools can receive individual road safety measures, even if they are not scheduled for, say, a full 'safer routes to school' scheme in the near future. These different approaches are discussed further below.

#### **4.1.1 School safety zones**

A 'school safety zone' has been defined as an area immediately around a school which is specially designed to highlight the presence of the school, and to provide a safer environment for the children, through measures like warning signs, traffic calming and 20mph speed limits.

They have been adopted to variable degree in the UK. For example, in the City of York, they have been introduced outside all primary schools and some secondary schools (approximately 70 schools in total). Moreover, a 2002 survey of York schools suggested that they had been very effective at reducing accidents. Specifically, the

survey showed that the number of 10-11-year-old children reporting that they had been involved in a road traffic accident was 3.6% at primary schools with recently built or upgraded safety zones compared with 6% at all primary schools. Those involved in the York programme report that safety zones have been particularly useful as an uncontroversial starting point for making the area around schools safer, and will now enable them to undertake more extensive work in the wider school catchments. Effectively, they will act as the 'seeds' for a more extensive network of safer routes. This may be particularly important since the majority of accidents on the school journey do not occur directly outside the school gates.

#### **4.1.2 Safer routes to schools**

In the UK, the most widespread initiative for addressing school journey safety problems is known as the 'safer routes to school' approach. This involves addressing safety problems across the whole of a school catchment, i.e. not just the area immediately around the school. It is seen as particularly important at secondary schools, where children are older and, therefore, less likely to be accompanied by an adult on their journey to school.

Introducing a 'safer routes to school' scheme often involves a series of stages. Initially, GIS techniques may be used to map postcodes, showing where children live. Alternatively, children may be asked to indicate their typical routes to school. Parents and children are then commonly consulted about where they encounter particular danger spots on the way to school or what measures they would like to see introduced. Those involved in schemes report that this consultation process is often very important in gaining endorsement for proposed actions, raising awareness of travel issues, or finding out things that they did not know. The consultation phase is then followed by action to improve safety - for example, improving the crossing facilities at key locations that have been identified. In some cases, specific routes to school are marked out on the pavement using brightly coloured symbols such as dinosaur feet.

Given the scale of safer routes work, local authorities often choose to work with a cluster of schools at the same time, or to undertake safer routes work in conjunction with other local road safety programmes in the area.

#### **4.1.3 Individual engineering measures**

In general, safer routes to school schemes are seen as a particularly effective way of improving school travel safety. However, such schemes represent a relatively 'deluxe' approach, requiring a significant amount of time and resources, and local authorities usually only have the capacity to work with a limited number of schools at once. Meanwhile, an increasing number of schools are starting to request safety measures as part of developing their school travel plan. Consequently, in parallel with a safer routes programme, many local authorities are now allocating funding which can be used to swiftly introduce individual measures where schools particularly need them.

In the 'Making school travel plans work' research, the most common measures introduced by schools were, first, safer crossings, and second, new traffic-free routes (i.e. footpaths, cycle paths, or, commonly, shared pedestrian and cycle paths). The study found that the lack of a suitable crossing on a busy road was often one of the most significant barriers deterring children from walking or cycling to school, and had a major impact on the perceived safety of their journey. School crossing patrols, to



help children cross these roads, were also often seen as an important way of overcoming this type of problem. The study also found that it was surprisingly common to introduce new 'short-cut' traffic-free routes through residential areas, even in areas with relatively high housing densities.

Next, 20mph zones with associated traffic calming had often been introduced in the school catchment or on the roads outside the school. This was less common at the case study schools than initially anticipated. This is partly because, in the UK, guidance states that 20mph zones can only be implemented where they are made self-reinforcing by measures such as traffic calming. The perceived advantage of this approach is that motorists learn that '20 means 20', encouraging respect for speed limits. The disadvantage is that the associated traffic calming measures are relatively expensive, and can only be introduced outside schools at a relatively slow pace, determined by the available resources of the local authority. Consequently, some campaigners argue that the guidance should change, so that self-reinforcing measures are not initially required. This would enable 20mph limits to be swiftly introduced much more extensively, and the associated traffic calming could then be introduced afterwards, prioritising locations where enforcement is needed and congruent with a viable pace of implementation.

Next, new entrances onto the school site had often been introduced by the schools themselves. These were seen as beneficial since they could enable children to avoid mixing with traffic on the main road outside the school, and could also significantly shorten walking or cycling distances, making these modes more attractive, and thereby reducing the number of children arriving by car.

There were also a range of other physical safety measures that had been introduced. These included better lighting; changes to traffic light timings (so that children had longer to cross the road); gateway features (for example, some schools had signs on the approach roads to the school with red lights which flashed at school opening and closing times to warn approaching motorists); one-way systems to reduce conflict between vehicles approaching the school; upgraded subways or bridges to make them more attractive for children to use; etc.. In some cases, changes were extremely simple but still helpful. For example, one school had converted the school fence into see-through railings - so that children leaving the school would be more aware of traffic on the road outside as they approached the school gates.

## **4.2 Parking restrictions**

The second main way in which safety around schools had been improved was through changes to parking restrictions and enforcement.

At a number of the case study schools, parking restrictions had been extended. In the UK, parking restrictions outside schools are specially marked with a yellow zigzag line. This marking has the advantage of being relatively visible, since it is bigger than a single yellow line, (the standard parking restriction indicator used elsewhere). However, without an associated Traffic Regulation Order<sup>viii</sup>, the marking is advisory only – and therefore difficult to enforce. Many authorities feel that this is unhelpful.

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<sup>viii</sup> A Traffic Regulation Order (TRO) is a legal order, which allows the local highways authority to regulate the speed, movement and parking of vehicles, and which is enforceable by law. The 1984 Road Traffic Regulation Act governs the introduction of Traffic Regulation Orders.

Consequently, some, such as Nottingham City Council, are in the process of introducing traffic regulation orders to make all yellow zig-zag lines outside schools compulsory.

As well as formal markings, some schools had introduced additional measures to restrict parking. For example, some had put wooden bollards on the grass verges to stop cars parking there. In one case, it had been necessary to install a barrier to stop parents driving onto the school playground.

Some schools were encouraging the police to make regular visits to the school, (for example, once a month), in order to help with parking enforcement. Sometimes, these visits were also used as an opportunity to involve police in school assemblies or classroom work or security coding of bicycles.

In a few cases, the school had got more actively involved in parking enforcement. For example, at one school (St Michael's CEVC Primary School in South Gloucestershire), the school had introduced an 'incident log', which was held in the school office. All adults were asked to report any parking problems, including the numberplate and type of any vehicle that was parked inappropriately. Details of offenders were then passed on to the police, who sent the driver a warning letter, highlighting that persistent offending would result in a fine and that a log of violations was being kept. Occasionally, the incident log had also resulted in the school contacting the local authority about particular road safety problems that needed addressing. The scheme was considered to have been very effective at deterring drivers from parking inappropriately.

### **4.3 Initiatives to manage traffic at the school entrance**

As well as introducing physical engineering measures or parking restrictions, schools had also introduced a number of other measures to reduce the dominance of traffic at the school entrance, thereby making it safer for children to arrive and leave the school on foot or by bicycle.

Some schools had held 'park away' days, to try and raise awareness of the benefits of a traffic-free school entrance. On these days, parents (and, in some cases, school staff) were encouraged to park a short distance from the school so that the school entrance was free of cars. These days were often promoted via the school newsletter, and often involved associated awareness raising activities - for example, children might be encouraged to walk to school in fancy dress, or given a free breakfast.

In some cases, 'park away' was formalised into an ongoing 'park and walk' initiative. When introducing a 'park and walk' initiative, schools had typically identified several car parks at a short distance from the school (belonging, for example, to a local restaurant, pub, church or community centre) where the owners were happy for parents to use their car park at school opening and closing times. Schools then encouraged parents and children to use these car parks and walk the remaining distance to the school, partly to reduce traffic danger near the school, and partly to encourage children to take more exercise. In some cases, schools were also running complementary walking incentive schemes, where children could gain points, stickers, badges or small prizes, depending on the number of times that they walked to school.

Where parents cars typically drove onto the school site to leave or collect children, some schools had introduced a 'hold back time'. During this time, (typically about ten minutes at the beginning and end of the school day), the school gates would be closed to cars, so that children leaving the school on foot or by bike could do so more safely.

#### **4.4 Working with parents**

In parallel with some of the initiatives described above, schools were often working directly with parents to try and improve school safety. Partly, this involved undertaking awareness raising and consultation activities, via posters, noticeboards, newsletters, meetings and the school website.

Some schools had also formalised their position on school travel and travel safety. For example, statements about encouraging safer travel had been written into school policy documents and the school prospectus. Induction events for the parents of new pupils had been modified to include a discussion about travel to school.

Schools promoting cycling often asked parents to sign a 'cycle permit' or 'consent letter' to allow their child to cycle to school. As part of giving this consent, parents were often asked to ensure that their children wore helmets, had bike lights, behaved appropriately on the school grounds, used cycle parking facilities, and/or completed the school's cycle training course. (In some cases, parents were also asked to take responsibility for the bicycle's road worthiness, and to accept that the school was not responsible for cycle theft).

Some schools had also included clauses about travel in home-school agreements. Home-school agreements for British schools were introduced in 1998, as part of trying to increase the sense of partnership between parents and schools. Home-school agreements are drawn up by the school's governing body, and typically include a list of commitments that the school signs up to, and a list of commitments that the parent is asked to sign up to. (In some cases, home-school agreements also contain a list of commitments that the students are asked to sign up to). Some schools have started to include travel issues within these agreements.

For example, one school (Burford School in Buckinghamshire) has a clause in the home-school agreement asking parents to sign up to a 'drivers code of practice'. This code asks parents to remember:

- Not to stop, even to drop off, on the zigzag yellow lines
- Not to obscure the view of the school crossing patrol
- Not to park on pavements or verges or across driveways
- Not to park within 15m of a junction
- Not to drive on the pavement or use driveways to turn
- Not to park on a bend
- Not to use certain junctions as a turning circle
- To try parking further from the school, e.g. at the local pub car park.

#### **4.5 Working with children**

Finally, schools often work directly with children on road safety issues.

Pedestrian and cycle training is being strongly promoted by the UK Department for Transport. Research suggests that it is more effective if this training involves an element of *on-road* training.

For child pedestrians, the Department for Transport is particularly promoting the 'Kerbcraft' scheme. In this scheme, a local authority officer trains community volunteers (usually parents) to work with small groups of 5-7 year olds. These groups are taught interactively at the roadside. The first Kerbcraft project (in Drumchapel in Glasgow) showed significant improvements in children's road safety skills. Consequently, the Department for Transport has allocated £9 million (equivalent to approximately W11 billion) to local authorities to enable them to introduce Kerbcraft schemes in disadvantaged communities in England. Kerbcraft is also being rolled out to communities in Wales and Scotland.

Either as part of pedestrian and cycle training, or as a parallel initiative, schools often encourage children to wear high visibility clothes and/or cycle helmets. For example, some schools only allow children to cycle to school if they wear a helmet. Some have run awareness raising activities - for example, asking children to design high visibility clothing in an art class or to investigate the reflectiveness of different types of material in a science lesson. Some schools have persuaded local businesses, such as the local supermarket, to sponsor road safety initiatives at the school by, for example, paying for fluorescent yellow vests for their pupils.

Involving children more generally, via assemblies and classroom activities, was also common – and, according to the 'Making school travel plans work', one of the most effective ways of achieving change in their behaviour. For example, in some cases, children had been specifically involved in identifying danger spots on the route to school and/or suggesting remedial measures or other ways in which walking, cycling or bus use could be made safer, either based on their own experience or by conducting surveys of their peers. In general, the increasing involvement of children in school travel work reflects a general trend in the UK towards greater child empowerment. UK schools are increasingly setting up 'school councils', which involve a democratically elected committee of children able to represent the views of others in the school. Such initiatives are being introduced at primary as well as a secondary level.

## **5. Conclusions**

Britain's national road safety strategy has achieved considerable success in recent years, but there are remaining concerns about the safety of child pedestrians and cyclists. In particular, research on child pedestrian safety highlights the importance of moderating traffic to create a safe physical environment in which children can travel.

School travel is currently a national policy priority, both for safety and other reasons. This work often aims to encourage children to walk or cycle, partly by improving the safety of doing so. Research into schools with 'good practice' travel initiatives highlights that engineering measures (such as introducing safer crossings, traffic-free walking and cycling routes, and 20mph zones) can be very important. However, it also highlights that there are a range of other ways in which traffic can be moderated,

and that child pedestrian and cycle training often acts as an important supportive measure.

All initiatives generally seem to be more effective when they involve partnership work between the school, local authority, police, local community, parents and children.

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<sup>1</sup> Department for Environment, Transport and the Regions (2000) *Tomorrow's roads – safer for everyone*. DETR, London.

<sup>2</sup> Department for Transport (2004) *Tomorrow's roads – safer for everyone. The first three year review*. Department for Transport, London.

<sup>3</sup> Christie N, Towner L, Cairns S and Ward H (2004) *Children's road traffic safety: an international survey of policy and practice*. Road safety research report 47, Department for Transport, London.

<sup>4</sup> MVA (1999) *A comparative study of European child pedestrian exposure and accidents* and MVA (2004) *A comparative study of European child pedestrian exposure and accidents: Further analyses*. Department for Transport, London.

<sup>5</sup> Grayling T, Hallam K, Graham D, Anderson A and Glaister S (2002) *Streets ahead: safe and liveable streets for children*. IPPR, London.

<sup>6</sup> Department for Transport and Department for Education & Skills (2003) *Travelling to school: an action plan*. Department for Education & Skills, Nottingham.

<sup>7</sup> Cairns S, Newson C et al (forthcoming) *Making school travel plans work: Research report*. Department for Transport, London.