

### **3. LITERATURE REVIEW AND BEST PRACTICE IN SCHOOL TRANSPORT**

#### **3.1 Introduction**

This chapter provides a review of research that has been undertaken in the area of school transport. It considers surveys carried out by government, operators and academic institutions into issues of safety, capacity and provision of bus services, walking, cycling and car use for the school run. Studies have been carried out into road safety, school location, safer routes to school, health and cognitive effects of travel and transport on young people and transport consequences of potential changes in circumstances. School travel and the drive for safer transport to and from school for pupils has become increasingly prevalent in recent years as traffic levels have increased and safety concerns have been realised. Many of the studies that have been carried out are as a result of these concerns. These studies, therefore, have concentrated on safety, congestion, health impacts and the need for change. One of the most congesting features of urban living is the home to school car journey. This pattern of travel creates serious delays and bottlenecks close to schools with resultant safety issues and frequently delaying the more environmentally friendly school bus (Fawcett, 2000). Issues of school transport and safety are currently the focus of much debate by policy makers, local authorities, schools, parents, pupils, the police and various interest groups (Wilson et al, 2003).

American Yellow School Bus  
(photo: S. Mackey, 1997)

Examples of 'best practice' in school transport provision from around the developed world have also been included in this chapter. These examples include

safer routes initiatives, walking buses, cycling trains, school travel plans, travel coordinators, car sharing, the yellow school bus model (UK and USA), safe transport initiatives, education and resources. Such examples of best practice may, furthermore, be considered in the context of school transport provision across Northern Ireland. Moves to ensure safer school transport and initiatives that have been borne out of the safer routes scheme have, largely come as a result of concerns expressed about congestion, safety while walking, safety while travelling on the school bus and health worries. Research has identified and quantified these problems and, in many cases proposed potential solutions.

#### **3.2 School transport research**

Research into school transport issues is limited. There have, however, been several studies carried out by the Department for Transport, Department for Education and Skills and the Department for Health. Studies relating to health effects, congestion,

and uptake of transport and journey length have been carried out in order to determine the effects of the school run and factors leading to mode choices. These have, however, been restricted to small numbers of children. No studies have been carried out of this nature among children and parents in Northern Ireland.

### **3.3 Research by Government and Policy Makers**

The Department for Transport (DfT) have carried out a number of studies into school transport provision in England and Wales. Information is provided about actively promoting safe, healthy and sustainable travel to school (Dept for Education and Skills; Dept of Health, 2005). This is reinforced by a number of committee reports, one of which was published in April 2004 and paved the way for the draft School Transport Bill. Essentially the committee report of April 2004 and the subsequent draft Bill have committed the Government to making it possible for as many children as possible to walk, cycle or use the bus to travel to and from school through the provision of spending on better infrastructure and public transport services provided for school pupils (DfT, 2004). The House of Commons Transport Committee considered the issue of school transport in March 2004, concluding that congestion caused by parents undertaking the 'school run' in cars is unacceptably high and that procedures need to be implemented to encourage pupils to walk, cycle or use public transport for their journeys to and from school (House of Commons Transport Committee, 2004). A survey of local authorities in England and Wales was implemented in July 1999 to obtain information on school travel plans and initiatives. The key findings from this research showed that local authorities had engaged in increased activity regarding the implementation of school travel plans and initiatives, but it also showed that progress was limited as a result of insufficient funding in the majority of cases. The start of a new school year sees a 20% increase in traffic as a result of the 'school run' and in the last ten years the proportion of pupils participating in that run has almost doubled to an extra million every day (Begg, 2001). The Transport Committee accused Government ministers of taking a leisurely approach to school transport problems. This, it was stated, is as a result of outdated legislation and substandard services (House of Commons Transport Committee, 2004). Parents are increasingly choosing to increase congestion by driving their children to school rather than using school transport provided. Furthermore, the report stated that 'the current system produces some school buses which are dangerous. It is clear that many authorities interpret best value as lowest cost' (House of Commons Transport Committee, 2004; Clarke, 1997).

A study for the Scottish Executive looked at safer routes to school in the classroom (Wilson et al, 2003). This research sought to develop an understanding of the causes of accidents and factors influencing safer travel to school – the importance of social disadvantage, accidents involving public transport, and a parental ability to assess children's pedestrian and traffic skills were all found to be important factors. Essentially, the findings showed that practices vary between different local authority areas, certain schools are more interested in road safety than others, perceptions of danger and the need to act vary from school to school, and there are competing priorities in schools often leading to the removal of road safety from top of the agenda. Participants in the research stressed the importance of the topic

- The need to ensure children can travel safely to and from school
- The need for appropriate resources
- The need to engage with pupils, parents and teachers alike
- The need to adopt a co-ordinated approach.

Obstacles, however, that were found to stand in the way included

- Lack of an integrated road transport system
- Disaggregation or responsibility
- An overcrowded school curriculum
- Poor image of road safety education
- Difficulties inherent in changing children's behaviour  
(Wilson et al, 2003).

Previous studies suggest that safer routes to schools initiatives should be multifaceted, include changes to the physical environment, take account of the fact that road safety is perceived to have a low value amongst secondary school pupils and their teachers, use high quality resources, include attempts to change young people's behaviour as well as their awareness and knowledge and be based upon relevant content, which is related to the wider school curriculum, delivered by trained teachers and based upon a school travel plan (Wilson et al, 2003; Halden et al, 2002; Granville et al, 2002; McWhannell and Braunholz, 2002).

Research has also been carried out to determine the effects, benefits and success factors of school travel plans at a selection of English schools. Significant changes in mode shift were reported at 28 schools as a result of such initiatives. Walking had increased, cycling had grown by (on average) 25% and pupils had been persuaded to use public transport. These shifts were made possible by safety improvements – maintaining zero accident status and improving pupils' road safety skills, introducing parking restrictions, highway safety improvements and increases in safety awareness. This resulted in;

- Health benefits for pupils
- Reduced congestion at the school gates
- Improvements in attendance and punctuality
- General educational gains
- Personal development gains
- Wider community benefits
- Increased awareness and appreciation of alternatives to the car  
(Cairns & Newson, 2005)

The National Foundation for Educational Research (2003) states that the need for effective arrangements to transport pupils to and from school is widely recognised as a critical safety issue. The purpose and aims of research being carried out are to identify the current concerns of LEAs, transport providers and school pupils; identify priorities for school transport; identify changes to be made to the regulatory framework; identify examples of good practice and offer recommendations.

### **3.4 Sustainable Transport Attitudes**

Young people are considered the most significant users of public transport, especially school bus services, but are not considered in a favourable light by many operators and drivers, perhaps due to their lower revenue potential or for reasons of mistrust associated with poor behaviour on vehicles. It is argued that similar barriers to use exist for young people when considering transport modes, namely perceived reliability, convenience, cost, quality and safety (Halden, 2003). This research considered perceptions of transport and how they evolve throughout a younger person's life in three distinct phases. It is argued that younger children consider the fun and enjoyable aspects of transport to be important, while older children and teenagers appreciate the freedom and independence of being able to travel without relying on lifts. Older teenagers tend to use public transport for reasons of cost, and the fact that they often have no alternative transport.

This study also identified a number of changing attitudes towards public and sustainable transport. Boys of lower secondary school age were found to be more susceptible to messages relating to health and fitness, while girls of the same age attach more importance to the social aspects of walking and using the bus. The essential finding from this work is that children and young people harbour positive attitudes towards sustainable transport, but the most important influence on their travel choices comes from the parents who often don't hold the same positive viewpoint. Moves to change and develop positive attitudes suggested include travel campaign development and education and ways in which parents and communities can become involved in adopting and acting on positive attitudes to sustainable transport (Halden, 2003).

### **3.5 Factors influencing school mode choice**

Research has suggested that children are more likely to walk or cycle to and from small schools in the immediate or surrounding area than to larger schools in more remote locations (Ewing et al, 2003). The situation in California, in the United States, was explored in this study and found that the rates of children who walk and cycle to and from schools were closely associated with neighbourhood population density (positively) and school size (negatively). Moreover, the number of intersections or roads to be crossed was considered to be a measurement of 'walk ability' with pupils less willing or likely to walk if they have more roads to cross over or negotiate enroute. In the UK, the probability of travelling by car to and from school was found to increase from just 20% at a distance of half a mile to 50% at 1 ¼ miles and 80% at 2 miles. The overwhelming outcome showed that students with shorter walking and cycling times are much more likely to walk and cycle.

Further research carried out and commissioned by the Department for Transport looked closely at the attitudes to and potential take up of additional home to school transport. This research comprised of a programme of both qualitative and

quantitative surveying. The qualitative research was designed to identify the main issues surrounding school transport, to determine beneficial features of a school bus service and to provide valuable input for the questionnaire design to be used in the quantitative phase of the research (DfT, 2003). The execution of the research saw ten focus groups with parents across urban and rural locations with an eleventh group held with pupils from a rural secondary school. The second phase – a questionnaire survey – covered eleven schools, obtaining responses from 1,098 parents (26% response rate) and 566 pupils (9% response rate). The key findings showed that 65% of parents would prefer not to drive their children to school, but that they felt they had no other reasonable alternative. The reasons for this were cited as: many families live too far from the school to which their child(ren) go or many parents have concerns about their child(ren)'s personal safety and security. The essential outcome of the provision on extra school buses at the schools surveyed was found to be that 32% of parents said they would no longer use their car in the morning peak and a further 46% stated that their total household mileage would decrease as a result. 48% of parents surveyed stated that they would consider sending their children on existing school buses – this included 44% of those parents who already took their children to school by car. It was also found that the likely take up of school transport varies significantly with the distance to and location of the school. Just 37% of parents living within one mile of school stated that they would consider sending their children on school buses while 79% of those living between one and two miles from school stated that they would consider it.

There is, however, much less interest among pupils. Just 11% of primary school pupils and 25% of secondary school pupils said they would switch to using the bus. Furthermore, there was a significant interest in an 'improved' system of school bus provision. 73% of all parents stated that they would be 'very' or 'fairly' likely to switch, but only if issues such as safety and overcrowding were sorted out. The most important aspects of an improved bus service included a seat for every child (considered essential by 95% of primary and 91% of secondary school parents), seatbelts and a smoking ban. The provision of supervision or onboard escorts was a well received idea amongst many parents and there was also greater importance attached to having drivers trained in the supervision of pupils and in child welfare.

### **3.6 Factors leading to increased school journey length**

The National Travel Survey for GB has shown an increase in the average journey length to school over the period 1985/86 to 2004 (see Chapter 2). Increased car ownership is considered to be a major factor in the growth of school journey lengths. It has also been shown that the rural population of the UK has been increasing, with rural dwellers travelling on average 1.4 times further than urban dwellers. School journey distances have therefore increased in rural areas, and are expected to keep doing so. This is a trend reinforced by the closure of many smaller rural primary schools and the fact that admissions legislation for pupils allows children to be sent to a school that is not local (DETR, 1999).

From a survey of twenty-seven schools an average increase in the distance travelled was measured at nine. Of these schools, a number of factors were identified for the increased distances children travel, these include;

- Community, voluntary-controlled, voluntary-aided and Foundation schools.
- Size of the school
- Childcare facilities in proximity for before and after school care
- Denominational schools

(DETR, 1999). Furthermore, Stead and Davies (1998) carried out research to explore whether the extension of parental choice in education has led to an increase in the distance travelled, but the findings did not show that there was any significant increase in the length of journeys as a consequence. These trends also have important consequences for safety outside schools. Parents driving their children to and from school are a major cause of accidents (Begg, 2001). The main reasons cited for this are double and even triple parking outside school gates which drastically reduces visibility for pedestrians and other motorists as well as leading to a sense of confusion for many children who are struggling to use the roads. School run accidents now kill or injure around 900 people annually in the UK and cause more than 40 deaths among the school children their parents are trying to protect (Sarler, 2005)

Research has also identified possible options for new school transport arrangements aimed at cutting congestion outside schools and reducing journey length and times. These include developing cycling as a feeder to school buses and staggering school opening hours to reduce the peak traffic flow (Sayer, 2004).

### **3.7 School locations**

Despite the fact that evidence from England and Wales shows that the rate of rural schools closure has been decreasing (350 closures between 1983 and 1994; 101 closures between 1994 and 1999), this has had an impact on travel patterns to schools. The closure of rural primary and secondary schools has led to and will continue to lead to increases in journey lengths and changes in journey patterns (DETR, 1999). This has been seen across Great Britain and in Northern Ireland with the centralisation of many primary schools or the amalgamation of a number of small establishments into one newer larger one. One such recent example in Northern Ireland can be found in Hillsborough, County Down with the recent completion of the new Downshire Primary School. This led to the closure of the Halftown Primary school and the amalgamation of pupils onto one site.

Children and young people in rural areas often find that school transport is not responsive to their needs (DEFRA, 2004). In many cases, pupils are unable to access after school activities and study or homework clubs because the bus leaves as soon as school has finished. It was also found that school buses are often intimidating environments for children, offering ample opportunities for bullies to exploit victims. Essentially, public transport in rural areas is neither flexible enough, reliable enough or cheap enough for pupils to easily avail of after school activities

should they want to remain in school (Forum for Rural Children and Young People, 1999).

### **3.8 A new approach to the school run**

A total of 41% of five to ten year olds in the UK travel to school by car (Begg, 2004). This is symptomatic of the school run that is undertaken by parents because it seems to make sense in terms of safety, family life and time/money budget constraints. A study of children in Buckinghamshire showed that 80% would prefer to walk to school rather than be taken by car (Bucks County Council, 2002). It is argued that if parents rethink their approach to the school run, the benefits for them and their children would be immense. Parents, it is argued, would reclaim some time and children would become healthier, more environmentally aware and, if supervised properly, travel in a safer manner. Research by the AA Foundation (2001) into what would make a real difference to the school run concluded that parents want to see measures undertaken to improve cycling, walking and public transport that would increase their confidence about letting their children travel to school by these modes. In this instance, almost 60% of parents stated that they could stop chauffeuring their children if measures were introduced. The remaining 40% stated that nothing could be done to encourage them to let their children use an alternative mode to the car to travel to and from school.

Public transport improvements were cited by parents in England and Wales, followed by cycling and then walking as measures that would encourage a change in their behaviour on the school run, while respondents in Scotland were more likely to suggest improvements that would encourage walking. Among those who cited public transport improvements 47% stated they would prefer their children to use specially provided school bus services, with 42% stating their support for good local public buses and the remaining 7% citing parental supervision onboard buses as a measure they would like to see introduced. Everyone who suggested cycling as an alternative wanted to see safe cycling lanes and routes with 25% wanting secure bike sheds and 10% suggesting training for cyclists. A safe walking route or pathway was supported by 75% of those who suggested they could let their children walk, with 40% wanting more safe crossing patrols and 10% suggesting a walking bus.

The reasons cited for parents not giving up driving their children to school included safety fears, the fact that many children were too young to travel alone and that there is often no viable or workable alternative. Many also suggested that this is a more convenient and much quicker way and that it was a run that was done on the way to somewhere else. Others also said that the trip was too long to make on foot, or by bicycle and that concerns about strangers and bullies played a role in their choices of transport mode.

In Scotland, 31 local authorities responded to research and stated that their road safety and school transport safety priorities included;

- Safer routes to school projects

- Expenditure on engineering and infrastructure improvements
- Appointment of school travel coordinators
- Provision of literature and resources for educational and informative purposes (Wilson et al, 2003; Halden, 2003).

Similarly, schools across the UK have been responding to the challenge to adopt a new approach to the school run. Initiatives include a variety of ways to integrate road safety education into the school curriculum. A safer route makes children more likely to walk and cycle to school (Irvine, 2005). An evaluation of California's safer routes to school programme concluded that changes to the built environment can increase pedestrian travel to school. Improvements such as additional traffic lights, new crossings and improved footpaths are suggested as key elements in reducing safety concerns and, thus, potentially increasing the proportion of children who would walk to school. Parental surveys in this study have shown that children who pass these improvements are three times more likely to walk or cycle to school.

Studies have identified pupils' suggestions for a number of ways in which safer routes to school could be improved. These include;

- More signs for road users to alert them to the presence of schools
- More cycle chains, sheds and secure storage
- More and better fences to keep vandals out of schools
- More videos to make the project work and development of pupils in safer routes more fun
- More information on how to deal with strangers
- More and better engineering works to provide better speed ramps etc
- More road crossing fences to keep pupils from crossing at dangerous spots
- More speed cameras and lights to slow traffic down
- Reduce or stop parents stopping and parking right outside schools
- Provide education to clearly highlight the consequences of dangerous and poor driving and inferior pedestrian skills (Wilson et al, 2003; DfT, 2004; Daisa, 1997).

A new approach to the school run is required, but there remain a number of barriers to the implementation of initiatives to remove parents and their children from the car including; parental car dependence, parental fears for safety of children from traffic and parental fears for security of children (Bradshaw, 1999). Although there seems to be a great deal of concern about school transport and the safety of pupils travelling on the part of local authorities, only about 10% of authorities in England and Wales have actually implemented Safer Routes Schemes on a permanent basis with 18% operating them as trials at the time of this report (Bradshaw, 1998). Despite expressions of concern there have been fewer initiatives than might be expected. Many local authorities have provided information on safer routes and travel plans should a school wish to avail of it, but there has been limited uptake to date. There are, it is suggested, two main issues which require addressing should local authorities and schools be encouraged to adopt and implement measures – finance and information.



### 3.9 Safety and other concerns

As children are amongst the most vulnerable road users, the European Commission launched three studies to assess the situation and to propose a number of measures that would promote safety in school transport. Overall findings from all these studies point to the need for;

- improvements in the coordination between different authorities
- integration of school transport in the local and regional mobility processes
- increasing awareness of children's safety during school journeys and the promotion of periodic retraining for school transport drivers
- introduction of procedures enabling a more detailed analysis of accidents (European Commission, 2004).

Recent research by the Scottish Consumer Council has found that 40% of school buses in Scotland are still not fitted with seatbelts. The study also found that pupils were generally experiencing a reliable service to and from school and that most were quite happy with the service (Scottish Consumer Council, 2005). There were, however, a number of issues that concerned parents and pupils. 25% of pupils rated their journey to and from school as a negative experience. Concerns were also expressed over behaviour and supervision on buses. The majority of school bus users appeared to get a seat on their bus, but this was not the case with those who use local public buses. Moreover, almost 25% of local bus users and 20% of school bus users stated that the bus rarely operated on time. Issues such as a lack of seatbelts were also examined and the fact that a majority of pupils stated that they don't use belts on buses that do have them available. Despite these concerns, the overall results of this research indicate that the general perception of travel by school to bus is positive (Scottish Consumer Council, 2005).

Some bus operators have produced information and factsheets about the relative merits of using school buses. One such operator, Metroline (Leeds) has provided information;

- a bus is better than a car because;
  - it is on average 7.5 times safer than a car (1991-92: DfT, 1993).
  - one double decker uses four times less energy to transport one person than in a full car (Go Ahead, 2003).
  - one bus carries the same number of people as thirty cars and uses ten times less space on the road (Go Ahead, 2003).

A number of road safety measures aimed at reducing road casualties among children have been suggested;

- safer roads – measures to slow traffic
- more careful driving
- pedestrian training
- safer cycling
- education

- conspicuity – use of reflective or bright clothing
  - safety in cars – seatbelts etc
  - safety in buses – seatbelts etc
  - safety on bicycles – use of helmets etc
  - publicity – raise awareness of road safety importance
- (Adams, 1995; Osborne and Davis, 1996)

Challenges facing road safety education have also been identified by research. Despite a growing number of road safety initiatives at both local and national levels and a shared view about what constitutes best practice in this field, there is a general lack of awareness about initiatives, which leads to an inefficient duplication of efforts and resources. There is also a need to integrate safer routes to school within the national curriculum, to train teachers appropriately, to involve pupils in the design of projects and initiatives and to ensure all projects and initiatives are and remain sustainable (Wilson et al, 2003; SSTAG, 2002).

A number of pupils in Scotland identified routes or parts of routes that they felt were dangerous, including busy roads, school gates opening onto main roads, 'blind spots', cars accelerating from school gates far too quickly, car and bus drivers who ignore speed limits and poor state of repair of footpaths and road crossing lights (Wilson et al, 2003). In terms of cycling, in addition to road safety concerns expressed by children in the same study, some pupils cited the following as reasons why they choose not to cycle to school;

- You would have to cycle by yourself. You couldn't go with your friends.
  - The bikes would just get stolen
  - It's difficult to cycle in a skirt
  - Sometimes you are worried about meeting strange people who might want to fight when you are not walking with your friends...it helps when there are a lot of you.
  - There are some paths which need more lights on dark winter nights
  - There are 20mph road lights and signs that come on in the morning and when it's home time but a lot of drivers just ignore these and speed by very quickly...it would make a big difference if there were speed cameras...because they'll get flashed and fined.
  - Speed bumps are too small
  - More road crossing fences
  - Sometimes crossings don't have a working bleeper
- (Case studies, Wilson et al, 2003).

The Transportation Research Board (TRB) carried out research into the relative risks of school travel by mode including walking, cycling, travelling by car and taking the bus. This research also found that approximately 800 school aged children are killed in motor vehicle crashes in the United States annually. About 2% of these deaths are school bus related. Only 4% of those school children that are non-fatally injured in the U.S. are school bus related. Moreover, school buses represent 25% of the distance travelled by school pupils but account for less than 4% of injuries and 2% of fatalities (TRB, 2002).

Research by the Royal Society for the Prevention of Accidents (RoSPA) has identified three main safety issues relating to school buses;

- The driver – the type and nature of the training and re-assessment, their driving qualifications, and the level of supervision and management
- The journey – management of journeys, their planning and the use of second drivers and escorts
- The vehicle – the age, condition, design, construction, standards of servicing, maintenance and safety checking and overall management.

This research concluded that not all vehicles used for school transport are suitable for the purpose, but that improvements to safety have been made in recent years. It is argued that all school journeys should be in a vehicle that is fit for the purpose and has seatbelts fitted as well as adequate and appropriate luggage storage (RoSPA, 2003). The Royal Society for the Prevention of Accidents has also published a Code of Practice recommending a minimum age of ten for children to cycle on public roads. It is considered that, at a younger age than ten, children are at more risk of not being competent enough to manage riding a bike whilst at the same time coping and dealing with the prevailing traffic conditions.

Parental fears drive the restrictions they impose on their children's independent mobility and reflect a growing level anxiety about safety and security in today's world. More vulnerable road users such as children are also affected by the so-called 'improved' performance of motor vehicles enabling drivers to accelerate faster in fewer seconds. That development then requires pedestrians to exercise much greater vigilance and care to avoid being knocked down (Hillman, 1999).

The second reason for parental fears far less justified by the evidence available but nonetheless understandable, is fear of children being assaulted or molested by strangers. Research carried out in the London Borough of Camden found that 90% of parents are either very worried or quite worried about the prospects of their children being attacked, molested or abducted while 60% expressed worries about the potential for children being bullied on the way to and from school (DiGuseppi and Roberts, 1997).

### **3.10 Effect on the environment, health and cognitive development**

Research has found that the current pattern of school transport mode choice is indeed detrimental to a child's development (Hillman, Adams and Whitelegg, 1991). It is considered an issue of serious concern that parents should increasingly choose to ferry their children to school in an ever increasing fleet of cars (Mayer Hillman, 1999). Moreover, this is increasingly being seen as having a detrimental effect on their health and cognitive development. While many children own a bicycle, many are not allowed to use it as a means of transport, especially for travelling to and from school! (British Medical Association, 1992; Hillman, 1993). The ultimate outcome of this restriction is all the more unfortunate in terms of the size of the world accessible

to children with a bicycle. Essentially, when compared with walking, cycling has the potential of extending a person's geographical catchment 10 to 15-fold. (Mayer Hillman, 1999). Increasingly, the pattern of chauffeuring children to and from school by car rather than independent travel on foot or cycle harms the health of people along the route then taken twice daily as it adds to the noise, pollution and danger from traffic (Whitelegg, Gatrell, and Naumann, 1993). Moreover the ability to make friends and friendship patterns are much more likely to be geographically-spread and to be more formally arranged for children who journey every day by car – this is a very different character to the more spontaneous friendships that can develop and thrive when children are free to casually drop in on each other. In addition to this, the prevalence of car travel for the school run promotes an unhealthy culture of self-interest as parents are increasingly seeking the safest perceived means for *their* children to get to and from their destinations – not just for school without due regard to the effects of that decision on the safety of other children and other road users as these vehicles are so dangerous for pedestrians and cyclists alike (Mayer Hillman, 1999).

The Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI Centre) carried out research into the effect of travel modes on children's cognitive development. The study recommended that studies are required to address the components of the travel experience that lead to a lack of readiness to learn, lethargy, exhaustion, poor academic performance and a lack of social skills. These factors are considered to be the result of a poor transport experience, mainly consisting of travel by car and time spent in congestion (EPPI, 2001). Furthermore, the school run is impairing children's health. It severely reduces their independence, the opportunity to mix and socialise with peers and deprives them of skills such as reading bus timetables and maps in a practical way (Begg, 2001).

It is also argued that a better system of school buses would improve punctuality for all road users, have economic benefits and improve the quality of life experienced by a wide range of people. Furthermore, there would be a reduction in greenhouse gas emissions and considerable environmental and health benefits would be experienced. These benefits include making the journey safer for pupils both on and off the buses; reduce truancy and improve discipline; and the entire community would reap the benefits of a much improved accessible and reliable source of transport (Sutton Trust, 2005). As a result of this research, there are a number of policy recommendations including the introduction of school transport for every pupil; and the introduction of a yellow bus scheme.

### **3.11 Best practice in school transport**

There are numerous examples of best practice in school transport, including measures aimed at improving the street infrastructure and safer routes to school and home to school transport schemes. As a result of increased levels of traffic and

problems surrounding congestion, travel safety and overcrowding on buses, much attention is and has been drawn to developing safer travel to and from school. These examples of 'best practice' can be found across local authority areas in Great Britain as well as a small number of initiatives in the Northern Ireland context including safer routes to school initiatives (Sustrans, 2004), individual school travel plans, free transport entitlement and transport assistance (DfT, 2003), school escorts, dedicated special needs transport, bus safety awareness initiative and yellow school buses (First Group, 2003). In 2001, the Queensland Government set up a school transport safety task force. The task force was charged with investigating issues relating to school transport safety and report back with recommendations for potential best practice. This was followed up by a study into the effectiveness of the SafeST (Queensland Safe School Transport) programme.

This section looks at these examples of best practice and considers how they may be used to improve the school transport and travel situation in Northern Ireland.

### 3.12 Safer Routes to School

Measures to promote safe routes both walking and cycling have precedence in recent years.

Photo by S. Mackey, 2005

to school for taken increased Developments

have included development of 'safe route' measures close to schools and on heavily used routes to and from schools. These have also involved the redesigning of road space to provide for pedestrians and cyclists (realigned junctions, cycle lanes, wider pavements, drop kerb pavements; railings at narrow kerbsides; highway improvements at road crossings, walking buses and reductions in traffic congestion and pollution together with safer driving at reduced speeds. These measures are often achieved through a combination of education, special events and school travel plans (Transport 2000 Trust, 2003; Safe Routes to School, 2004).

The benefits of safe routes to schools are

- Fewer child casualties and road crashes
- Safer roads for all, especially pedestrians and cyclists
- Less pollution and congestion
- Healthier lifestyles
- Greater independence and freedom

(Safe Routes to School, 2004)

Ways in which such policies can be put into practice include the development of 'walking buses' through the Rural Transport Partnership. In Staffordshire, for example, a walking bus provides accompanied walking to school for children in a number of schools throughout the county (Countryside Agency, 2003). Walking buses are an alternative to using private cars or school buses for shorter journeys to school; they also improve children's health and reduce congestion and pollution. The pupils are supervised in these schemes by volunteer parents and walk to school in a line of pairs, picking up other pupils on the route.

Sustrans are leading the way in safer routes to school. The aim of the organisation is to ensure every child in the UK has a safe route to school. Pupils, parents, teachers, school Governors and local authorities can become involved with Sustrans' safer routes initiatives through the development of travel plans, 'Bike it' and practical tailored projects to encourage pupils to walk, cycle and use public transport for the sake of their health, their safety and for environmental reasons. Many safer routes schemes, particularly in Northern Ireland focus on health and road safety issues. Furthermore, the benefits of a safe routes to school project include;

- Fewer child casualties and road accidents
  - Healthier lifestyles
  - Safer roads for all – especially pedestrians and cyclists
  - Less pollution and congestion
  - Greater independence and freedom
- (Safer Routes, Northern Ireland, 2003).

Further information reinforcing a safer routes scheme as an example of best practice includes;

- Physically active = better students. It is stated that walking or cycling to school makes young people more alert and ready for the day's activities. Safer routes projects are recognised as developing interest among pupils in relevant local issues (Sustrans, 2004)
- Development of the whole student through direct involvement at project level, encouragement of a wider understanding of their local area and the provision of safer, healthier and more fun routes to school (Sustrans, 2004)
- Fulfilment of National Curriculum. The topic of safer routes can be applied to subject areas such as citizenship, English, maths and geography. It is for this reason that Sustrans provide resource packs.
- Keeps young people fit and healthy.
- Gives young people greater independence and 'it's fun!' If children are not afforded a degree of independence, it is stated that, they are suffering from deprivation of freedoms enjoyed by previous generations and may experience serious impacts on their physical health and mental well being (Sustrans, 2004).

Essentially, safer routes to school schemes are means by which people are actively encouraged to think about their travel decisions. A key element of this approach is the mapping of routes which children take to and from school and identifying the problems or potential problems that exist along the way (Scottish Executive, 2003). In this context, safer routes projects are developed that include pedestrian and cycle crossing facilities, new (lower) speed limits and traffic management schemes, schemes to provide adult accompaniment for children who walk to and from school, classroom activities and lessons about road and personal safety and better facilities for cyclists at schools (secure bike racks/sheds and lockers etc.)

Safer routes to school is an initiative that is not unique to the United Kingdom. Similar approaches have been adopted across the United States, specifically in California (Epidemiology and Prevention for Injury Control Branch, 2004), Texas

(Texas SRS Program, 2001), New South Wales (NSW Govt, 2004), New Zealand (Christchurch City Council, 2002), and Germany (Limbourg et al, 1998). In Germany, research has shown that it is necessary to change the design of the urban road environment – speed reduction measures, traffic calming, safe crossings, clear views between drivers and children, safe paths for pedestrians and cyclists and safe bus stops. This is reinforced by traffic law enforcement measures – speeding laws, parking laws, cycling laws and the use of safety belts and restraints in vehicles – and the use of protection devices for children – safety belts and restraints in vehicles, safety belts in buses, bicycle helmets and reflecting school bags and coats (Limbourg et al, 1998).

Essential elements of safe routes across the board are the same. In American states, these elements include 'sidewalk improvements, pedestrian and bicycle crossing improvements, on-street bicycle facilities, traffic diversion improvements, off-street bicycle and pedestrian facilities and traffic calming measures for off-system roads' (Texas SRS Program, 2001).

Proposals for improving the safety of school transport have been developed by Flahaut (2003). These include a formula: zero anomaly, implying good equipment and qualified drivers and compliance with the transport contract; zero delay, as poor punctuality can lead to accidents; zero lag by which any details on incidents are immediately relayed; leading to the ultimate target of zero deaths. This can be achieved, it is stated through measures such as harmonised statistics; regulatory directives; improvements in stop zones; rules on one child per seat and the prohibition of seats placed longitudinally; access to transport for disabled people; harmonised security controls; improved vehicle signage; communications between the vehicles and emergency services; driver training; youth education and zero alcohol use. Many of these have been implemented in part or whole across a number of examples of good practice.

### **3.13 Northern Ireland Case Studies – Safer routes to school**

#### **St Joseph's College, Belfast**

The key features of St Joseph's input include a school travel plan, cycle storage and a high level of student participation. These features were built from an initiative looking at reasons why the school should promote safe and sustainable transport. One of the key outcomes is that of a 'school safety zone' covering a stretch of the Ravenhill Road outside the school and neighbouring Primary school, St Michaels and Aquinas Grammar school. This slows traffic with clear road markings, signs and traffic islands. There has been a marked increase in pupils cycling to school as a result. (Sustrans, 2004)

## St Brigid's College, L/Derry

The key features in this initiative are cycling, walking, cycle storage and a school travel plan. The plan has been used to encourage safer and more sustainable ways of travelling to and from school. Furthermore, significant pupil consultation and involvement has resulted in route planning, surveys and poster designing as well as small incentive points to encourage cyclists.

Safe cycle parking is provided and overlooked by a security camera, while lockers have been provided for those who travel by bicycle. In 2004, a school safety zone was created outside the school, including safe crossing facilities, reductions in traffic speeds and prevention of parking outside the school where parents are actively discouraged to drop their children off here. Numbers of pupils cycling have trebled, while pedestrian skills training has raised awareness of road safety issues (Sustrans, 2004).



School safety zone at St Brigid's College, L/Derry (Photo: S. Mackey, 2005)

### 3.14 Walking

The provision and development of walking infrastructure promotes sustainable transportation. More specifically, the provision of such infrastructure will protect the role that walking plays in terms of mode share by encouraging walking activity; enhancing the status of cycling and encouraging a growth in mode share; promoting healthy lifestyles; improving accessibility levels, environmental quality and contributing to improved perceptions of safety (Hine and Mitchell, 2003). Recently improvements have been made in terms of giving pedestrians greater priority, especially at road crossings (DfT, 2003). Aspects of walking policy and issues under the scrutiny of policy makers and those responsible for infrastructure include road crossings, signs and lighting, home zones, health promotion, regeneration, walking to school, work and leisure facilities, links with public transport, management of pedestrian facilities and environmental enforcement (Transport 2000 Trust; DfT, 2000).

In developing pedestrian environments specific attention has been paid to road crossings that can serve pedestrians badly – long waits at street-level signalled crossing points, unpleasant and threatening subways and intimidation by fast moving traffic. In practice, moves have been made in many areas to give people a choice of either the street level crossing or the subway (Transport 2000 Trust, 2003). Signs and lighting have also come under close scrutiny so that pedestrians can be made easily aware of their location, surrounding area and route required. This, it is claimed, helps instil confidence (Exeter City Council, 2003). Moves away from high level street lighting with its orange hue have also been forthcoming with the introduction of dual intensity lighting where the light is brighter until a specified time when it switches to normal street light intensity (Northmoor, Manchester, 2002). Health promotion is also a key policy factor in promoting walking. Encouragements



towards walking in some areas have recently involved financial incentives for those who walk to shops and local services (Walsall Council, 2002).

### **3.15 Walking buses**

The walking bus is considered one of the safest ways to travel to and from school (Mouchel Parkman, 2005). Adult volunteers 'drive' and 'conduct' a group of children to walk a pre-determined route to pick up and leave off children at designated stops. The walking bus operates in all weather with all children and adults wearing a fluorescent jacket. This is a very good way for children to learn valuable road safety skills and gain a degree of independence. It is a healthy, educational and environmentally sound way of getting to and from school each day (Kia, 2005). The walking bus website ([www.walkingbus.com](http://www.walkingbus.com)) highlights six reasons for setting up such a scheme;

- Exercise
- Safety
- Road sense
- Socialising
- Environment
- Easy breathing

The health benefits cannot be underestimated (US Dept of Transportation, 2005) – studies have shown that fewer children are cycling and/or walking to and from school, leading to problems associated with little or no exercise such as becoming overweight. It is stated that the implementation of a walking school bus is both a safe and fun way to address these concerns as well as actively contributing to the reduction in traffic levels close to schools.

A variation on the walking bus theme is the cycling train, in which adults supervise children cycling to and from school in convoy. Schools tend to introduce these schemes as a result of problems associated with vehicle parking close to the school gates, congestion problems, health problems and environmental concerns (Deutsche Welle, 2005; Friends of the Earth, 2004). In October 2003, 1,142 children set a world record for the longest walking bus. The record was achieved in Kingston, London (BBC News, 2003).

### **3.16 Pick up and set down points**

Many local authorities stipulate that school bus operators should only use designated bus stops or points on the route where visibility is good. Many also attempt to ensure pupils do not have to cross the road when going to or from the bus wherever possible. These steps are reinforced by guidelines provided to parents and guardians stressing that it is their responsibility to ensure pupils reach the pick up point safely and on time, and are met from the bus (Thorntwaite, 1994). Furthermore, concerns regarding a lack of bus shelters, especially at less heavily frequented pick up points have seen an increased impetus to provide the necessary protection from the elements and to ensure a dedicated place in which alighting or boarding may take place, especially in rural areas.

An example of best practice regarding often necessary feeder or connecting bus services is found in North Yorkshire. The local authority policy states that the driver of the first vehicle should never move off until the second connecting vehicle has arrived (Thornthwaite, 1994). Accessibility is a problem and connecting bus services in rural areas are the norm. Many school children have to use more than one bus to get to and from school. When connecting and changing vehicles, the pupils are exposed to potentially serious safety issues – crossing roads, visibility problems on narrow or dark country roads and waiting for the second vehicle to arrive. With these concerns in mind, the North Yorkshire approach to prevent a bus driver moving on until a connection is made safely, is a particular approach that is being increasingly widely adopted in the rural context.

### **3.17 Cycling**

It is important to bear in mind the potential conflicts that often exist between non-motorised and motorised transport networks and to ensure moves to reduce such conflicts do not restrict non-motorised users. The Countryside Agency is placing emphasis on policies that prioritise footways, footpaths and cycle links. This emphasis is reinforced by a requirement to ‘enhance the status of cycling...’ (Hine and Mitchell, 2003). The development of safe and secure places in which bicycles can be left is one such measure whereby cycling is being promoted through policy and practice. As part of cycling policy, the national cycling strategy has been developed and includes local transport plans, countryside transport strategies, travel plans for employers, schools and hospitals, local development and structure plans and health promotion activities. Guidelines have been produced by the Department for Transport regarding security, safety, health and well-being and accommodation of bicycles on buses and coaches (DfT, 2003).

It has been argued that cycling widens opportunities and provides a number of opportunities to tackle social exclusion (DfT, 2003). Furthermore, cycling offers;

- Low cost private transport
- Access to jobs and services for economically deprived people
- Independent mobility for children
- Improved perceptions of security
- Opportunities for disabled people to participate in physical activity (DfT, 2003).

These opportunities are highlighted in policy information provided by the Department for Transport and the Social Exclusion Unit. Practical measures have been undertaken to provide infrastructural improvements in terms of cycle lanes and pathways, safe and secure parking locations and provisions for cycling in local transport plans and strategies. Cycle friendly infrastructure remains relatively rare, but has seen increased prominence in recent years (DfT, 2003). The UK National Cyclists Organisation states a need for policies to promote increased cycle use to be integrated with national transport policy. Many local authorities have developed policies relating to cycling and many such policies include consideration of the needs

of cyclists in all highway schemes, improvements in existing facilities for cyclists, reduction in cycle casualties and, ultimately to encourage more people to cycle (Buckinghamshire County Council, 2002).

'Bike it' is a scheme run by Sustrans which aims to increase the proportion of school age young people cycling to school and for other trips. Four schools 'Bike it' officers are currently in place in England – Derby, York, Manchester and Bristol working with forty schools. These schools are considered enthusiastic for cycling and are in areas where the potential for cycling is available. The key elements of the scheme include the provision of secure cycle storage, shelters and other street furniture (Urban Engineering, 2004).

### **3.18 Bus usage**

The Department for the Environment, Transport and the Regions initiated research into potential best practice for increasing the use of public transport by school pupils. This came as a result of a decline in the use of buses by pupils, mainly as many were reluctant to do so (DETR, 1999). The key elements of best practice recommended to reverse the decline include;

- Improving services – increase the convenience of using the bus and raise perceptions of safety.
- Lowering fares – concessions
- Tackling crime – issues of vandalism, graffiti and assault
- Raising awareness – marketing to promote services and publicise routes and fares initiatives
- School and parent organised transport schemes – dedicated school buses provided for those who do not qualify for statutory transport provision.

The Royal Society for the Prevention of Accidents (RoSPA) have proposed a number of key measures to ensure school bus travel is safe. These include journey planning in advance, ensure the vehicle is fit for the purpose, provided with seats and seatbelts for every passenger and secure storage for books, bags and other luggage (RoSPA, 2003).

First group claim that their yellow school bus is “not just a vehicle – it’s an institution”, an integrated school transport system with the potential to reduce congestion, help children, help schools and support parents. The yellow school bus initiative includes one of the safest passenger transport vehicles in the world, near door-to-door services and the same driver every day (First Group, 2005). Research carried out for the Department for Transport has shown that there are many attributes of the yellow school bus scheme that are liked and appreciated by pupils and parents. These include the close to home pick up, the fact that the buses are not available to the general public, a familiar driver, a guaranteed seat for each child with no standing and the provision of CCTV to reduce instances of bad behaviour and vandalism.

Key features for a primary school yellow bus scheme were also developed (DfT, 2003) in consultation with users and include;

- Yellow buses with a distinctive livery
- Specifically selected and trained driver (crucial)
- Preferably operate with an escort
- Minimisation of distances to be travelled
- Services unavailable to the general public
- Lap and diagonal belts should be provided
- CCTV should be used
- The 3+2 layout should be acceptable
- Payment should be made on the bus
- A guaranteed seat should be available for all pupils – no standing

Key features for a secondary school yellow bus scheme were also developed (DfT, 2003) in consultation with users and include;

- Vehicles should have a distinctive livery, but students preferred them not to be yellow
- Specially selected and trained driver
- Home/school distances should be minimised to offer an attractive alternative to the car
- Vehicles should not be available to the general public
- CCTV should be provided
- Luggage racks should be available to maximise seat space
- Guaranteed seat with no standing permitted
- On bus payment with discounts for additional siblings
- Parking space for buses at school entrance
- Music and radio should be provided – this was seen as a means by which behaviour was improved.

Best practice also stretches to advice for using school bus services safely. These are provided by a series of organisations, including the National Safety Council for the United States – ‘have a safe place to wait for your bus, away from traffic and the street; stay away from the bus until it comes to a complete stop and the driver signals you to enter, keep a safe distance from the bus when you get off; use the handrail to enter and exit the bus; and be aware of the street traffic around you’ (NSC, 2000).

### **3.19 Car sharing**

Although not very popular, car sharing can be very effective in reducing congestion, especially close to schools. There are now data based computer systems available to match up compatible routes and proposed journeys to school (Mouchel Parkman, 2004). The key is flexibility about times and routes to reduce the peak traffic flow and to reduce the number of cars on the road.

Some schools have actively encouraged parents who drive to car share, a particularly useful tool in combating congestion, especially when children travel long distances to school. Schools generally assist by providing a list of parents who are interested or by providing the school minibus to parents for the school run.

### **3.20 School travel plans**

School travel plans aim to encourage schools to identify and solve problems associated with the school journey (especially those related to safety). The plans are produced by the schools themselves and do not have to include physical measures to improve routes but instead are a 'way of living and learning (Road Safety Strategy for Wales, 2003). They also involve the identification of practical measures to more effectively and efficiently manage school travel.

School travel plans have been extensively promoted by local authorities and education boards in recent times. The evidence since the introduction of many such plans has shown a downturn in the levels of congestion experienced close to schools in many areas (Aberdeenshire Council, 2004). A school travel plan is a document that highlights and summarises current travel patterns and transport and traffic problems, sets targets and identifies solutions to the problems posed. Such a plan should include all aspects of the journey to school, encouraging walking, cycling and methods of public transport as well as the improved management of those remaining 'school run' cars. The aims of the plan should include;

- Reduce traffic congestion close to the schools
- Increase the personal safety of pupils and parents on the journeys to and from school
- Offer alternative modes of travel to pupils and parents
- Improve health and fitness levels
- Identify problems school pupils face on their journeys and deal with them
- Develop independence and self-esteem among pupils
- Reduce or remove the vicious circle of school travel – parents fear danger of traffic so they drive their children to school, resulting in an increased level of traffic and the parents fearing safety from the level of increased traffic (Sustrans, 2002).

Furthermore, a school travel plan sets out possible measures schools could adopt to reduce problems caused by the 'school run' such as;

- Walking buses
- Crossing facilities
- Pedestrian training
- Traffic calming measures (St Michael's Primary School, St Joseph's College and Aquinas Diocesan Grammar School, Ravenhill Road Belfast – 'school safety zone')
- Car sharing
- Walk to school weeks
- Information and marketing of alternatives (Tameside Council, 2005)

A completed school travel plan is a reference for future developments, a means by which a school demonstrates its commitment to safer routes, a basis for increased funding and infrastructure improvements. The plan needs to include details of how children currently travel to and from school, how they would like to travel in the future, targets and objectives and proposed measures to achieve these targets. Primarily, a travel plan aims to 'steer' families away from the use of a private car to transport children to and from school, and towards alternatives. The main objectives of a travel plan should, therefore, ultimately be to reduce car use, but targets set must be 'smart' – **s**pecific, **m**easurable, **a**chievable, **r**ealistic and **t**ime bound (Royal Borough of Kensington and Chelsea, 2005).

Research by Tameside Council shows that a school travel plan has benefits for the school, the local community, the parents and for the children. These benefits include improved safety, reductions in congestion and less time spent in traffic jams, the establishment of safer walking and cycling routes, reductions in pollution (noise and air), build better links between parents and the school, improvements in childrens' health and fitness, travel awareness, road user skills and surroundings.

School travel plans have been adopted by a number of schools and are being actively promoted across local authorities in the United Kingdom as a whole. There is much advice available for schools and organisations seeking to develop such a plan.

Many local and education authorities have developed or devised assessment criterion with which the development, implementation and effectiveness of a school travel plan can be measured. In Hampshire, the local authority has identified a number of levels as follows;

- Level zero – interest shown by the school, but no visit or presentation has been made
- Level one – school working towards a school travel plan
- Level two – draft school travel plan submitted
- Level three – active school travel plan implemented
- Level four – school travel planning award (Hampshire County Council, 2004).

School travel plans form part of the UK Government's Travelling to school initiative which brings together the education, health and transport sectors to, essentially, ensure improvements in road safety around schools, safer, more enjoyable and more sustainable travel to school, improvements in public health by promoting walking and cycling, and reducing car dependency (DfT, 2003). Such plans, therefore, play a large part in ensuring these targets are met and provide the main route by which these targets are achieved.

### **3.21 School Travel Coordinators**

The Scottish School Travel Advisory Group (SSTAG) recommended in 2002 that school travel coordinators should be set up at local authority level. These coordinators will, ideally, work alongside schools on issues such as school travel

plans. They have three main roles: to promote best practice, to work across local authority departments and to work towards common goals (Scottish Executive, 2005). More specifically, the roles of school travel coordinators provide a range of functions;

- Assistance with school travel assessments
- Administration of funds to schools
- Negotiating between different sectors
- Developing materials and resources to help with travel planning
- Facilitating changes to transport provision as required
- Negotiating best practice with planners of new schools
- Developing targets for school travel
- Coordinating partners to improve behaviour on school buses
- Raising awareness

This, it is claimed, results in a more effective school transport system across 265 secondary and 1700 primary schools in Scotland. Just 15 secondary and 179 primary schools have already developed travel plans. School managers are provided with information to help them inform decisions on transport allocations and maintain consistency with school travel plans.

Similarly, in Australia a school bus safety advisory group has been proposed. The role of such a group will be to monitor the implementation of school bus safety initiatives and to identify best practice, to identify new developments in school bus safety, to identify gaps in knowledge of the effectiveness of safety measures and to recommend future research.

### **3.22 New infrastructure – case study example**

At Our Lady and St Patrick's school in Knock, East Belfast buses and cars used the same area within the school grounds for dropping off and picking up pupils before the merger of the school in 1985. The problems associated with this arrangement included safety hazards for children walking between and beside cars and buses as well as serious problems for buses entering and leaving the school grounds.

Ulsterbus and the school's architects produced drawings for a proposed bus turning circle using the existing link from the main road and removes buses from neighbouring residential roads. This project was implemented and took almost one year to complete at a cost of £90,000. To avoid severe disruption bus arrival times were staggered during construction. Around 1,100 of the school's 1,250 pupils travel by a fleet of twenty buses which use the new turning circle and this eliminates the need for pupils to enter the road to board or alight from their bus. Furthermore, a totally separate pick up and set down area is provided for cars to keep them away from the buses.

### **3.23 Education and Resources**

Many organisations provide curriculum centred resources to educate pupils in the safe use of roads and transport modes to and from school. The Department for Transport provide a primary school teaching resource. This includes lesson plans for key stage 1 and key stage 2 pupils covering literacy, numeracy, personal and social health education (PSHE) and science. Such resources are also backed up by lesson plans and educational aids provided by a number of local authorities. One such example is provided by Lothian Spokes safe routes to schools resources, which provides lesson plans and activities (Lothian Spokes, 2004).

An official 'walk to school' website has also been developed ([www.walktoschool.org.uk](http://www.walktoschool.org.uk)). This is a joint campaign between Travelwise and Living Streets with funding from the DfT and TfL. The organisation provides resources, posters and downloads for schools, parents, pupils and local authorities. Walk to school weeks are a key feature with a number organised nationwide during the course of the school year. The information provided highlights the benefits of walking to school by "doing a bit to keep you fit" (Walk to School, 2005).

The Department for Transport have also introduced a number of initiatives to educate and inform across the board. These include a school travel resource pack for teachers, parents and governors. Furthermore, a guide to best practice in increasing bus use for journeys to school has been developed. This guide is based on a number of case studies from around England, Wales and Northern Ireland. Resources include the THINK! Advertising campaign, consisting of factsheets, activity books and posters ([www.thinkroadsafety.gov.uk](http://www.thinkroadsafety.gov.uk)). This scheme is complimented by the 'Hedgehogs', a resource designed for 8 to 11 year old children containing educational games and activities to teach road safety in a fun and practical manner ([www.hedgehogs.gov.uk](http://www.hedgehogs.gov.uk), DfT, 2003).

Further resources are available from the DfT and include an action plan developed in association with the Child Road Safety Sub Group of the Road Safety Advisory Panel (DfT, 2004). Initiatives under the auspices of this action plan involve 'Lets decide – walk wise', a project to enable children to become safer pedestrians through the provision of practical exercises – safe walking on the pavement, discovery trail – what is traffic?, discovery trail – what is a safe place to cross?, and a decision trail – what is a safe route to take? These exercises include artwork, route planning and model making to enable the young people to fully appreciate the need for a safe route (RoSPA, TRL, 2004).

Another educational resource is entitled 'step forward' and provides practical training for children to become safer pedestrians. This is, essentially, supervised roadside training which is entirely child centred, aiming to develop skills and strategies through group discussions and practice (DfT, 2004). Parents and/or carers are actively encouraged to develop and establish good and safe habits amongst their children through;

- Setting good examples
- Creating opportunities for the development of a child's vocabulary and understanding when out walking



- Talking to the child(ren) about what is happening every time a road is approached and crossed
- Playing practical and enjoyable games to reinforce practice
- Ensuring messages are clear and consistent and that supervision is provided (Step Forward, 2004)

In March 2005 a safe transport anti-bullying campaign was launched in Ballymena. This consists of a poster campaign and pupil advice card (NICS, 2005). In August 2004, a safe transport working group was also set up in the Ballymena area to develop a co-ordinated pilot initiative aimed at tackling bullying and anti-social behaviour en route to and from school.

### 3.24 Child Safety Bus

A Translink initiative saw the launch of the Child Safety Bus in 2003. This vehicle targets teenagers and tours schools, particularly in areas where safety issues have proved problematic (Translink, 2004). This has been reinforced by a video promotion, a youth conference service and youth diversionary work which involves participation in fun days, parades and festivals to promote safer use of public transport.

The safe school travel booklet sets out how school transport operates, ways in which school staff, parents, students and pupils can play an important part in making the journey to and from school a safe, reliable and comfortable experience, standards of service which the education and library boards can expect from drivers and escorts of vehicles involved in public transport and responsibilities of school, parents and pupils alike (Translink, 2004; Translink, 2005).



Translink Child Safety Bus  
(Photo: S. Mackey, 2005)

A Translink safety video and education pack was also produced for primary school children. 'The Voyager' aimed to educate children through English, Mathematics, Art, History, Geography, Science and Technology on safety and behavioural issues when travelling by bus (Translink, 2001).

### 3.25 Safe and Sound Challenge

This is an initiative that was launched in 1999 and aims to increase the number of children and young people who walk and cycle to school safely 'through innovative travel schemes (DfT, 2003). Schools were invited to develop and implement

proposals appropriate to their individual circumstances to promote healthy and safe travel to and from school in England. Examples of successful initiatives include;

- The training of pedestrians
- The training of cyclists
- Walking buses
- Secure cycle sheds and bike provision
- Education programmes aimed towards parents, teachers and pupils
- The training of volunteers to provide schools with safety advice

### **3.26 Specification and tendering**

Vehicle appearance, maintenance and comfort are considered important factors in creating a particular image of school buses. A majority of operators will not put new and expensive vehicles into use on school duties because of the fear of vandalism and damage often subjected on such buses. As a result of this and the frequent use of ageing buses for school transport, poor standards of maintenance and cleanliness often raise concerns about safety and reliability and suggest that many operators have little regard for their passengers – the school pupils (DfT, 2003).

A guide to best practice suggests four barriers to overcome;

- Short term planning and low quality provision
- Poor contract management
- Lack of professionalism
- Insufficient budget to introduce new or improved services (DfT, 2003)

Key elements of best practice that should, therefore, be adopted include improvements in vehicle appearance, reductions in vehicle age, increase in vehicle comfort levels, longer contracts, quick reaction from authorities to poor performance from operators, professional drivers, regular drivers for school buses and implementation or development of new infrastructure to improve safety levels by minimising the potential for pedestrian/vehicle conflicts.

### **3.27 School term harmonisation**

The five Northern Ireland Education and Library Boards meet annually to attempt to harmonise school terms and holidays in order to secure discounts from bus operators and to make the provision of transport to and from school (especially those which share buses) as efficient as possible (DfT, 2004). There have, inevitably been difficulties surrounding holiday arrangements, but some progress has been made and small discounts have been achieved. It is, however, still the case that some schools in the same area do not harmonise term times. One such example is found at Dromore High School and Banbridge Academy in County Down. Many of the pupils at these two schools share buses in and around the Dromore and

Dromara areas, but problems arise when holidays are still different at the tow schools and buses are required to operate for a small number of pupils from the one school that is not on holiday (Mackey, 2001).

### **3.28 Conclusions**

Research has highlighted many of the issues surrounding school transport. The vast increase in traffic on the roads and the number of children who now travel to school by car as opposed to walking, cycling or using the bus is conducive to the levels of congestion experienced close to schools and adds to safety concerns for those who would continue to walk.

- The common parental perception has been shown to be that children are safer travelling by car and that, if they were to walk, cycle or use the bus, they would be exposed to a number of unacceptable risks. Evidence is available to show that there are many risks to travelling by car and that there have been many more accidents involving children who travel by car. A number of studies have investigated the factors involved in influencing school mode choice and factors increasing school journey length (Ewing et al, 2003; DfT, 2003; NTS 1995-97; DETR, 1999; Stead and Davies, 1998; Begg, 2001; Sayer, 2004).
- Mode choice and increased journey length are closely related as these studies have shown that as parents choose to transport their children by car, traffic levels and journey times increase as a result. Much of the research has considered the differences in perceptions and realities. Essentially, many studies have shown that a number of parents refuse to let their children walk or cycle to school alone as a result of a number of misapprehensions relating to safety and security.
- The detrimental effects of these choices have also been researched and include impacts on physical and mental health, personal, social and cognitive development and environmental concerns (EPPI, 2001; Begg, 2001; Sutton Trust, 2005; Hillman, Adams & Whitelegg, 1991; Mayer Hillman, 1999; BMA, 1992; Hillman, 1993; Whitelegg, Gatnell & Naumann, 1993)

School travel plans are increasingly being adopted by schools across the UK. Many local authorities are actively encouraging and promoting the development of such plans and information regarding the development, planning and implementation can be found on many council websites. The aims of a school travel plan should always include

- a reduction of traffic congestion close to the schools,
- an increase in the personal safety of pupils and parents on the journeys to and from school,
- offers of alternative modes of travel to pupils and parents,
- means by which health and fitness levels can be improved,
- an identification of problems school pupils face on their journeys and dealing with them,
- the development of independence and self-esteem among pupils,

- the reduction or removal of the vicious circle of school travel – parents fear danger of traffic so they drive their children to school, resulting in an increased level of traffic and the parents fearing safety from the level of increased traffic (Sustrans, 2002).

Such plans are no good if not implemented and there needs to be the will amongst parents, pupils and school staff to carry out the aims of the plan to achieve the optimum travel and transport pattern for their school.

Many of these examples of best practice in school transport can be applied to the Northern Ireland situation. Some have had varying degrees of success, while funding is an issue that always causes difficulties in such circumstances. It is clear that safety should always be of paramount importance when children are travelling to and from school, and this is the reason why safer routes initiatives command such support and have had increasing success throughout the United Kingdom. School safety zones, infrastructure improvements, education and harmonisation of school terms are all aspects of the wider picture that have been implemented across Northern Ireland, but remain to be expanded to cover all schools and be applied to all pupils as such approaches are increasingly deemed necessary.