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Foreword

This short guide outlines a methodology for reviewing the impact that traffic calming measures have on children's use of their local environment and on parents' perceptions of the safety of an area.

The methodology was refined and tested as part of the Department for Transport's Neighbourhood Road Safety Initiative (NRSI) implementation project, in areas where traffic calming and other measures were put in place to reduce road accidents, particularly to pedestrians in residential areas. The development of the guide was made possible through the support of the Department for Transport.

The research methods include direct observations of children's activities and interviews with children. Given child protection concerns, the distribution of the detailed methodology has been restricted to those organisations with a genuine need for it. This information is available separately from Child Accident Prevention Trust on written (but not email) request. Please write to:

Dr Mike Hayes
Projects Director
Child Accident Prevention Trust
22-26 Farringdon Lane
London EC1R 3AJ

**MEASURING
THE IMPACT OF
TRAFFIC CALMING
ON CHILDREN'S
LIFESTYLES:
an introduction**

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Introduction

Traffic calming measures have tended to focus on reducing the overall number of accidents occurring and/or reducing the severity of the injuries that are caused by these accidents. What is less well understood is that the speed and amount of motorised traffic in residential areas has a significant effect on children's lifestyles.

In fact, motorised traffic limits children's travel, in particular their walking and cycling. This affects both their physical and social activities, contributing to obesity in children and a reduction in neighbourliness in the community as a whole.

This short guide is designed to help local authorities monitor the effects that initiatives to change drivers' behaviour – such as traffic calming – have on children's lifestyles. It may also prove useful to local community groups who wish to review the impact of a traffic calming scheme in their neighbourhood.

The guide looks in turn at:

- The impact of motorised traffic on children's walking and cycling, and why making local journeys is important for children's healthy physical and social development.
- The outcomes that should be identifiable and measurable, if traffic calming measures have been successful in altering children's use of their local environment and parents' perceptions of the safety of their neighbourhood.
- An outline of the research methods.

The impact of traffic on children's walking and cycling

Over the last 50 years, residential roads have become unsafe for children to cross. In consequence, children have lost the freedom to travel around their own neighbourhoods. The reduction in walking and cycling journeys made by children is a factor in increasing levels of childhood obesity.

Over the last 35 years, children's 'ranges' – the distances that children are allowed to travel unaccompanied – have been severely restricted¹.

Journeys to and from school only form a very small part of children's overall walking and cycling, and only happen for half the days in the year. The other half are free play days for children; even on school days children may have a few hours for play.

Traditionally children played outside within sight and sound of home, where they felt secure but were not actually supervised. Parents understandably do not allow their children out on the streets where traffic speeds are fast – in this context, 20 mph is fast. Where traffic speeds are slow, parents still let children play out close to their own homes, and where the roads are safe for children to play out, children still want to make local journeys.

While such journeys tend to be relatively short, they are much more frequent than is generally realised. It has been estimated that, in an estate with 100 children, if only 50 can play out, in a year they will make over 280,000 journeys on

foot and by bicycle². This healthy and non-polluting travel is not included in any official transport statistics.

Where children can play out, both they and their parents have more friends³. An absence of friends, together with a restriction on the distances that children travel without adult accompaniment, may explain in part the rise in fear of 'stranger danger', even though the risk of harm by strangers is in reality very low.

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Identifying and measuring outcomes

If traffic calming schemes are successful in altering children's and parents' perceptions of the safety of their neighbourhood, the following outcomes should be identifiable and measurable:

- More children make unaccompanied journeys within their neighbourhood. (Children from a younger age or those who were previously restricted by their parents now make journeys).
- Children make more unaccompanied journeys within their neighbourhood. (Children make more journeys overall).
- Children's ranges increase. (The distances children are allowed to travel unaccompanied increase).
- Parents and children feel safer – both physically and socially – within their neighbourhood. (People feel there is less likelihood of their being injured by a car but also that the area itself is socially safer – friendlier, less threatening).

It should be noted that the results are only indicative of changes, unless sample sizes are such that statistical testing can be undertaken.

An outline of the research methods

This section outlines how the research can be set up and carried out, looking in turn at:

- checking the researchers
- identifying the area and the timescales
- conducting observational research
- conducting interview research
- conducting proxy research.

As noted earlier, given child protection concerns, the distribution of the detailed methodology for the observational research and the interview research with children has been restricted to those organisations with a genuine need for it. This information is available separately from Child Accident Prevention Trust upon written request. Please write to:

Dr Mike Hayes
Projects Director
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22-26 Farringdon Lane
London EC1R 3AJ

Checking the researchers

The research should be carried out by staff or consultants who have up-to-date CRB checks. Other safeguards, such as taking up references on all personnel conducting this work, should also be undertaken. The researchers should wear identity badges at all times.

Identifying the area and the timescales

The first step is to identify the roads that are likely to be affected by the traffic calming measures and that children are likely to cross – not just on foot or by bicycle but also by, for example, using a pedal car, skateboard, tricycle or skates, when playing or hanging out. Their journeys may include going to friends' houses, the shops, a play area, the street corner, to and from school, etc.

Ideally, the first round of research should be undertaken six months to one year before the traffic calming measures are installed, with a second round undertaken six months to one year after the measures have been completed, so that children's behaviour has settled to what is likely to continue.

If possible, both rounds of research should be carried out at the same time of the year, so that like is compared with like. The summer months are preferable, as there will be a reasonable expectation of good weather and hence a larger sample of children outside.

Observational research

The benefits of non-interactive observations of children is that the researcher can discover what journeys children are making, how they are making them and what differences there are relating to age and gender.

Both children and their parents tend to under-estimate the numbers of journeys that children make when they are 'playing out'. This is because the activities themselves are seen to be the important things, whereas the travelling between the activities is merely a means to an end. However, the activities are dependent upon the journeys and the journeys constitute a significant proportion of time spent 'playing' or 'hanging out'.

Observations can quite quickly ascertain the roads where children walk and cycle freely and those where they do not. If observational research is carried out before any traffic modifications are made, and then again at the same time of year but after the modifications have been made, comparisons can be made of the numbers of children making unaccompanied journeys within their neighbourhood, the distances children are allowed to travel unaccompanied, and any differences in the age and gender of the children.

Some caution should be exercised in interpreting the results as representative of behaviour throughout the year. For example, previous research has found that girls tend to be more restricted by their parents during the winter with its dark nights than during the summer.

Interview research

Interview research can reveal the reasons why children play out in some roads and not in others. Parents and children can give insights into their personal geography of the area, the distances children are allowed to travel unaccompanied, and how friendly and/or unfriendly they feel their area is.

Interview research, if carried out carefully, can identify cultural differences, and discover the views of hard-to-reach groups and those not seen in the observational research because they rarely venture out of their homes unaccompanied⁴.

However, while interview research can give high quality information, it does need to be treated with some caution. Reasons given for not travelling around their own neighbourhood can include fears of traffic, bullying, drug users, alcohol users, paedophiles, etc. The risks associated with some of these issues are nearly always an over-estimation.

People tend to refer to the issues above when they are describing a place that feels unsafe. This is often an expression of their fears, rather than the true level of the problem. For example, 'syringes on playgrounds' is regularly cited in interview research as a reason for not going to a playground. Yet the reality is that qualified playground inspectors go for years without seeing a syringe on a playground.

What interviews can do is note any changes in people's perception of their own area. Interview research can also note changes in how far parents let their children go unaccompanied, how neighbourly parents think their area is, and at what age parents let their children go out unaccompanied.

Proxy research

While research based on the area of concern is preferable, a piece of proxy research may give some indication of children's freedom to travel around their area.

Finding out, on a particular day of the year, how many children travel to school unaccompanied can give a year-on-year figure, which will have some relevance – particularly if the school is in the heart of the neighbourhood in which the traffic calming developments have taken place.

It should be noted that the journey to school constitutes a very small proportion of children's overall travel. However, it

is reasonable to assume that if a child can travel to school unaccompanied, then they are likely to travel to their friends, playground, community centre, library, place of worship, etc on their own as well.

It is relatively easy to compare results one year with another year. Changes can be noted between the ages at which children are allowed to travel to school on their own. Any gender or cultural differences can also be noted. In some areas, road safety officers have historical records going back to the mid 1970s, which will give comparative data.

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About the Child Accident Prevention Trust

The Child Accident Prevention Trust is a national charity committed to reducing the number of children and young people killed, disabled and seriously injured as a result of accidents.

Our aim is to create a safer environment for children and young people. We understand that experimenting and risk-taking are part of growing up, and we work to secure low injury rates without compromising children's health and quality of life.

Our current priorities are to narrow the inequalities gap in childhood accidents, to reduce serious injuries with long-term consequences, and to spread knowledge about what works in preventing childhood accidents. We achieve this through a range of activities:

- We support parents to understand how they can improve their children's safety, by providing them with opportunities to learn about both hazards and practical prevention measures.
- We take our knowledge and skills to the frontline of family support, by providing specialist advice on accident prevention to staff who work with parents and children in their local communities.
- We also act as a centre of specialist knowledge on child accident prevention for other charities, companies, standards bodies, and local and central government. We share information on what works, spread examples of good practice and encourage the development of safer products and environments, and the delivery of more effective prevention services.

Child Accident Prevention Trust

22-26 Farringdon Lane

London EC1R 3AJ

t 020 7608 3828

f 020 7608 3674

e safe@capt.org.uk

w www.capt.org.uk

Registered charity number 1053549

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