# **Cycle To School!**

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A proposal for integrated policies and actions to stimulate safe bicycle use by schoolchildren in order to preserve the Dutch cycling tradition.

## **1** Introduction

Cycling to school in The Netherlands is decreasing The Netherlands has a long cycling tradition. Cycling to school has always been the normal option for children who live too far from school to walk there. Until the 1970s, children walked on their own to school from the age of 6 years old. If the distance was greater, they went by bike. Being accompanied to and from school was exceptional.

With increased prosperity and the corresponding growth in car travel, the number of traffic accidents increased so greatly [1] that parents decided to accompany their children to school. Children being brought to and from primary school became the rule rather than the exception.

In the beginning it was mostly mothers that brought their children to school. They walked or cycled with the children and so the mode of transport did not change. Although most families owned a car, the breadwinner (the man) usually took it to his work. In The Netherlands, the number of working mothers remained low for a very long time. Over time, the percentage of working mothers increased and the car became more and more used for transporting children to school and other destinations: the "backseat generation" was born.

Figures show that cycling to school in The Netherlands is decreasing and transport by car is increasing [2]. The growing call from schools that "something must be done" about the traffic chaos near schools caused by cars transporting children, confirms this trend. Information collected since 1995 by the Dutch National Statistical Office on the travel of children under 12 years of age underlines this undesirable change in the modal split [3].

Several different factors are the cause of this situation:

- Increased car ownership (including more cars in one household) leading to increased car use;
- An increased number of families in which both parents work, and an increase in the number of working single mothers, means that children are brought to school by a parent on the way to his or her work;
- Greater distances to (larger) primary schools
- The ease and comfort offered by the car for transporting both children and goods;
- The low status of the bike, compared to that of the car;
- Ever-increasing car traffic meaning less safe roads to school.

This last factor leads to the development of a vicious circle on the way to school and around the school itself: children are brought to school by car because of the unsafe traffic situation and yet their cars serve only to increase the danger! And near the school, five minutes before classes begin, the scene is often completely chaotic: people in randomly parked cars throw the doors open – often in a hurry – leading to dangerous conditions, particularly for those children arriving by bike. All this means that fewer children are allowed to cycle to school, or do so only when they are older.

# 2 Why is it important that children walk or cycle to school (in the first place accompanied by one of their parents)?

Two sets of reasons can be given as to why it is important that children walk or cycle to school, firstly for the child him- or herself and secondly for society as a whole.

#### 2.1 Benefits to the individual child

#### 2.1.1 Independent travel

On average, children in The Netherlands currently are accompanied to school by one of their parents until they are nine years old. If this is on foot or by bicycle, the children gain a wealth of experience that allows them easily to travel independently to school at a later age. By contrast, children brought to school by car up to the age of nine learn little about real traffic situations and must still learn to cycle under supervision or continue to be transported by car. Usually the latter happens, often under increasing protest from the child itself. After all, children want to cycle independently to school [4, 5].

#### 2.1.2 Accident prevention

Closely linked to the above is that after primary school most children must cycle to secondary school. If they have not built up both practical cycling skills and knowledge of real traffic situations, they are more likely to be involved in accidents. And that is precisely what is happening at the moment in The Netherlands: the number of accidents involving cycling children between 12 and 14 years old has risen sharply [1). This underlines the need to provide a firm foundation for cycling amongst younger children. In addition, if children start riding mopeds at the age of 16, the experience they have obtained as cyclists makes them safer road users. Currently it is not unusual that 16 year olds, without any experience of cycling, start riding mopeds. Further, whilst approximately 20% of primary schoolchildren (and 50% in the larger cities) are descended from immigrants, many immigrant families have no cycling tradition. Consequently bike ownership and bike use is very low. The consequences do not need to be spelled out.

Finally, every car driver who has been a cyclist is better able to behave safely towards cyclists as he or she understands what it is to be in their position.

#### 2.1.3 Independent mobility

Research has shown that independent mobility and being able to be outdoors without supervision is essential for children's personal and social development. Children who are limited in their independent mobility fall behind in their personal and social development in comparison to children with more freedom of movement [6]. It is important that children can walk or cycle home with their own chosen friends, can stop and play somewhere or do something on the spur of the moment with their classmates. For the "backseat child" everything is planned.

However, increased traffic has meant that the average age at which children are allowed to independently cross the street has gone up from six years old in 1970 to eight years old in 1993 [7].

Children's spatial awareness and their understanding of how the world is structured is increased by independent travel. Further, they become more self-confident and can handle themselves better in traffic. For parents too, it is an advantage that transporting their children does not needlessly take up their time.

#### 2.1.4 Health

Outdoor exercise for a half-hour per day is both healthy and necessary, according to the medical world. Children who do not exercise regularly run more risk of becoming overweight or even obese, with accompanying health risks [8].

#### 2.2 Benefits to society as a whole

#### 2.2.1 Safer routes to school

Less car traffic means more safety on the roads leading to school. At the same time, more children cycling to school provides a good reason to take infrastructural measures to ensure their safety.

#### 2.2.2 More safety in the school surroundings

Better visibility and, hence increased safety, can be realised if there are fewer cars in the area immediately around the school.

#### 2.2.3 Less congestion

School traffic forms a substantial part (20%) of peak hour traffic [European Commission (1999)].

#### 2.2.4 Selective car use

Selective car use is an aim of Dutch transport policy. Short car journeys (up to five kilometres) should be replaced by cycling or walking. Over 80% of primary schoolchildren live within one kilometre of their school. By choosing to cycle to school, children also learn implicitly that it is normal to use the car selectively in the city.

#### 2.2.5 A safe and "liveable" city

And last but not least, any reduction in car traffic provides more opportunities for the realisation of a safer city with a higher quality of life.

## **3** Comparisons from Europe

The situation in The Netherlands has been sketched above. Before going on to examine in more detail the current situation in Delft, a medium-sized Dutch city where the authors are based, it is interesting to get a better view of the situation around educating for cycling in Europe. Delft is the national representative in a network of European organisations promoting European policies aimed at realising sustainable development. The network of Urban Forums for Sustainable Development is made up of nineteen members representing all Member States and works on common projects on themes such as waste, water and urban mobility, air quality and health. Key figures in each member organisation were asked the following questions to provide a picture of the "bike-ability-test" for 10 year old schoolchildren in their area.

- 1. What percentage of 10 year olds have their own bicycle?
- 2. Of these bicycles, what percentage is in good condition? (i.e. working brakes, reflector, light, no loose or missing parts)
- 3. What percentage of 10 year olds has received theoretical traffic education (aimed at the child becoming an independent road user)
- 4. What percentage of 10 year olds has cycled in real traffic situations for a sufficient number of hours under supervision/ guidance of an adult? (estimated at 1,5 hours per week, 40 weeks per year over 4 years, = 240 hours)
- 5. What percentage of 10 year olds has completed a practical cycling test outwith the real traffic situation? (e.g. in the playground or schoolyard)
- 6. What percentage of 10 year olds has completed a practical cycling test in a real traffic situation?

The results of the survey, which is not claimed to be scientifically representative in any way, are shown in Table 1 below.

City	Besançon	Delft	Dublin	Hamm	Venice	Vienna	Average
	France	Netherlands	Ireland	Germany	Italy	Austria	
Population	117,000	100,000	1,000,000	190,000	290,000	1,600,000	
1. Ownership	75	90	70	99	80	90	83
2. Condition	60	70	50	65	65	70	62
3. Theory	80	90	5	95	30	-	52
4. Supervision	15	40	10	30	-	40	24
5. Playground test	50	15	5	95	0	70	44
6. Real test	10	80	0.5	15	0	20	9

#### Table 1: Results (in percentage) of European education for cycling survey

NB: The matter of wearing a helmet did not form part of our research. We share the opinion of the European Cyclists Federation (ECF) [9] that this should not be compulsory.

The European Commission (EC) has published a handbook [4] for local politicians to try and stimulate the use of bicycles. The EC found that as many as 20% of rush hour car journeys involve children being transported to school. At the same time, approximately 50% of schoolchildren would prefer to travel to school by bike. The average distance between home

and primary school in Europe is less than 3 kilometres. The EC recommends making use of cycling's popularity among schoolchildren to realise a change.

Targeting schools as the destination for cycle routes or cycling facilities and informing parents and their children of the facilities available is also recommended. A good start at local level is the appointment of a cycling co-ordinator responsible for the pro-cycling policy within the local administration. It should be the task of this co-ordinator to remind everybody of the implications of cycling and to act as a resource person to all levels (policy, execution, monitoring) and in all different departments concerned with the question of cyclists' mobility.

In the United Kingdom such an approach has been adopted in the National Cycle Strategy project, of which "Safe Routes to School" is an important part [10].

## **4** Activities in Delft

In Delft, between 1982 and 1987 the first network of bicycle paths in The Netherlands was established [11]. At that time Delft was recognised as the number one city for cycling in The Netherlands. The local council elected in 1998 has the ambition to regain this status for Delft, a wish shared by the local population. During a unique survey held in March 2000 on how the residents of Delft wanted to money to be invested in their city, 38% chose explicitly to invest in bicycle facilities, making it the second most popular issue. Accordingly, the council has taken action in a number of policy areas to ensure that children cycle, and keep cycling:

- 1. Traffic: the existing good and safe network of cycle paths in the city is currently being further improved by the solving of bottlenecks on seven through routes;
- 2. Education: In the new school year, a start will be made with a programme where a dedicated teacher will instruct children in small groups about safe cycling. This will support children taking the national traffic examination.
- 3. Neighbourhood approach: special attention is to be paid to the school surroundings. Car access to these areas will be either restricted or speed will be limited to 30 kilometres per hour. Establishment of 30 kilometres per hour zones in residential areas means that children can play safely outdoors and practice cycling on their own.

These initiatives show that the municipality has an important role to play by giving priority in their policies to schoolchildren's safety while cycling. This will at the same time contribute to the safety of all cyclists and pedestrians. Rigorous implementation of "Sustainable Safety", the Dutch traffic safety policy, will also help.

However, the municipality is not the only actor involved in improving cycling in Delft. Just as in the rest of The Netherlands, for years numerous activities and projects to encourage cycling to school have been carried out by a wide variety of organisations. Examples include the theoretical and practical traffic examination, which is preceded by a form of compulsory traffic education taught via various methods in primary schools. Bicycle quality checks are carried out, campaigns for better visibility and cycle skills training sessions are held, both in the playground and "for real". In addition, there are campaigns to encourage parents to bring their children to school by bike, countless projects to improve routes to school and yet others to improve the school surroundings. For example, in 1997-98 a project to stimulate walking and cycling to school by improving the school surroundings was undertaken by the "Right of Way for Kids" organisation and the Dutch Cyclists Union [12]. Such projects are mostly focused on schools, children and parents.

It can be seen that there are, and have been in the past, many well-meaning efforts to encourage safe cycling to school in Delft. However, despite all their good intentions these individual projects and activities often only have a marginal effect as they are poorly linked to each other and because their emphasis is mostly placed on only one aspect of the problem. For example, a safe road layout and the behaviour of other road users – tasks for the municipality and the police in terms of design, enforcement and information provision – are at least as important as the other initiatives mentioned above.

It can be seen that action from all parties is required. Municipalities, schools, parents, the police: none can do it alone. Collaboration at local level is needed. And within the municipality all relevant departments must be involved: not only traffic, nor only education or that dealing with the neighbourhood approach. A shared policy is stronger. The environmental department can also provide supporting arguments and actions. Recently the Delft municipality has been reorganised and can nowbetter support this integrated approach.

The many projects and initiatives to stimulate safe cycling to school mentioned above are valuable but their effects could be many times greater through an integrated approach in which activities and organisations reinforce each other, and in which all aspects are covered. The integrated approach for "cycling to school" needs powerful initiatives at national and local level, based on the realisation that it is good for children, parents, municipalities and for society as whole that children learn to cycle properly and go to school safely by bike. The first of these initiatives could be a "cycle to school" campaign.

## **5** Recommendations for The Netherlands

#### **Recommendation 1**

At local level more power must be given to valuable existing projects by placing them in an overall framework, and new initiatives must be developed to cover the aspects where gaps are found.

All aspects must be taken into account:

- 1. Theoretical traffic education made up of practically applicable knowledge (with a test at the end);
- 2. Cycle skills training, in the playground and in the street;
- 3. Practical cycling test in a real traffic situation;
- 4. Condition of the bike
- 5. Visibility in traffic
- 6. Safe school surroundings
- 7. Safe routes to school
- 8. Health and exercise
- 9. Children's independent mobility;
- 10. Quality of life and the sustainable city.

As an element of a strategy of shared involvement by school, parents, municipality and police to make the school surroundings and way to school safer, the practical traffic examination can be a good way of rounding off the "Cycle to School" campaign each year.

#### **Recommendation 2**

Local activities must be supported by traffic safety organisations at national level. This requires close co-operation between, amongst others, the new umbrella organisation for traffic-safety in The Netherlands and the Dutch Cyclists Union. These organisations can help by creating a framework within which all parties involved can deliver their contribution, and act as co-ordinators of this framework. The campaign "Cycle to School" can then be designed at national level to ensure that vision and message are unambiguous.

#### **Recommendation 3**

An important part of the "Cycle to School" campaign should be a national conference where experiences are exchanged and which serves to keep the subject on the political agenda.

#### **Recommendation 4**

Local activities concerning cycling to school must be supported by the national government. One possibility could be the drawing up of a "Bicycle Masterplan Junior" (where the word "junior" refers to the target group and not to the size of the project), coupled with the provision of necessary stimulation funds and other supporting measures. One important element of this "Bicycle Masterplan Junior" should be a "cycle to school" campaign. The topic falls under the responsibility of several ministries, each covering their own aspect: the Ministry of Education, the Ministry of Transport, the Ministry of (youth) Welfare, Sport and Health, and the Ministry of Housing, Spatial Planning and the Environment. The "large cities policy" should also be involved. In this respect, The Netherlands can learn from the United Kingdom where, in the framework of the National Cycling Strategy, several ministries are working together to reach clear and ambitious objectives.

Policy aims of the "Bicycle Masterplan Junior" relevant to cycling to school could be:

- Within two years, areas around all primary schools are designated as 30 kilometre per hour zones;
- Within five years, all primary schools are accessible safely by bicycle within a radius of one kilometre;
- Use of cars for school transport is reduced by half;
- All primary schoolchildren are trained so that at around 10 years old they are ready to sit the theoretical and practical traffic examination;
- "Cycle to School" is stimulated for five years by means of a national campaign featuring all 10 aspects noted under recommendation 1 above;
- "Cycle to School" should be able to count on the continued attention and support within the ministries involved.

Such a "cycle to school" campaign should be carried out within the framework of the "Bicycle Masterplan Junior" programme. This would make the "Bicycle Masterplan Junior" a valuable follow up to the previous successful Dutch initiative, "Bicycle Masterplan". If cycling to school continues to decrease, the chance is high that the, by international standards, high share of cycling in the total Dutch mobility picture, will decline. For this reason "Cycle to School" is essential to keep The Netherlands on the bike!

## References

- 1. Ministerie van Verkeer en Waterstaat (Adviesdienst Verkeer en Vervoer) Kerncijfers verkeersonveiligheid 1950-1998; [Ministry of Transport, Road safety figures 1950-1998.]
- 2. Voetgangers vereniging schoolverkeercijfers jaargangen 1988/1993/1998 [Dutch Pedestrians Association, school traffic surveys], 1988/1993/1998.
- 3. Centraal Bureau voor de Statistiek: De mobiliteit van de Nederlandse bevolking, jaargangen 95, 96, 97 en 1998; [National Statistical Office, Reports on the Mobility of the Dutch Population], 1995-1998.
- 4. European Commission. Cycling: The Way Ahead for Towns and Cities. 92-828-5724-7 European Communities, 1999.
- 5. Kinderen Voorrang en Voetgangers vereniging. Ik ben even naar mijn vriendje. [Right of Way for Kids and Dutch Pedestrians Association, survey on children's mobility], 1999.
- 6. Dorothee Degen Zimmermann [et al]. Lebensraume fur Kinder, Emperische Untersuchungen zur Bedeutung des Wohnumfeldes fur den Alltag und die Entwicklung der Kinder. National Forschungsprogram Stadt und Verkehr, [Room for children: Empirical Research into the Influence of the Daily Environment for Childrens Development, National Research programme for City and Transport], Zurich, 1995.
- 7. Ute Breithaupt. Driven out, sent off. In: Proceedings of Strategic Highway and Traffic Safety Conference. The Hague, September 1993.
- 8. Frederiks [et al]. Body Index Measurements in 1996-7 Compared with 1980. In: Arch Dis child 2000;82:107-112
- 9. European Cyclists Federation (ECF). Improving Bicycle Safety Without Making Helmet Use Compulsory. Brussels, November 1998.
- 10. Paul Osborne, Safe Routes to School, In: Proceedings Velo-city, 11th International Bicycle Planning Conference Graz/Maribor, 1999.
- 11. Cities Make Room for Cyclists. Bicycle Masterplan Project Group. Ministry of Transport. The Hague, 1995.
- 12. Marian Schouten. Veilig schoolverkeer, een doe-het-zelf zaak, Fietsersbond en Kinderen Voorrang; [A do-it-yourself-method for safe school traffic for parents and schools, Dutch Cyclists Union and Right of Way for Kids], 1996.

# **Bibliography**

- 1. Ole Helboe Nielsen. Safe routes to school in Odense, Denmark. In: The Greening of Urban Transport [ed. Rodney Tolley], Belhaven Press 1990, London.
- 2. Roelof Wittink. Promoting safe cycling and bicycle use in the Netherlands, the role education can play. In: Proceedings of Strategic highway and traffic safety conference. September 1993, The Hague.
- 3. Ian Stewart Haigh, More Cycling by Better Roadcraft Education, In: Proceedings Velocity, 11th International bicycle planning conference 1999, Graz/Maribor.
- 4. W. Sern, M. Haaring, H. Trapman, A. Aalbrecht. De Verkeersleerkracht. [The Traffic Teacher] Zoetermeer, 1999.
- 5. Let's Clear the Air. International Institute for the Urban Environment. July 1998, Delft