# Developing School-based Cycle Trains in New Zealand

Land Transport New Zealand Research Report 338

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# **Executive summary**

## Context

Working with the Energy Efficiency and Conservation Authority (EECA) and North Shore City Council on the 'Travelwise to School' pilot project on the North Shore in 2002, we surveyed the parent community to ascertain their interest in various alternative modes for their children's travel to and from school. We found that 87 of the 184 families who responded would allow their children to cycle to school in a group with another adult supervising their ride. One-third of these families offered to supervise the children on a rostered basis. This suggested that there was a high, albeit latent, interest in the wider community in what we call the 'cycle train'. Because of this interest, we undertook to implement cycle train networks in New Zealand schools.

The cycle train is similar in approach to another alternative way of getting children to and from school, the 'walking school bus' (WSB), where adult 'conductors' walk along a set route to school, collecting children from designated 'bus stops'. The cycle train is essentially a 'walking school bus' on bicycle wheels.

Since 2002, cycle trains have become increasingly common internationally: in Flanders, Belgium there were 317 cycle trains (involving 2390 children) operating during the school year 2004–2005, and several schools in the United Kingdom now have school-based cycle trains.

## Method

Following extensive consultation with key government stakeholders, we developed a set of resources to trial the cycle train concept in New Zealand. The process for establishing cycle trains is somewhat more complex than that used for walking school buses, given the greater safety issues around having groups of children cycling on-road. Hence, more detailed safety guidelines, a bike and helmet check, and a skills training workshop for the children form part of the cycle train resources.

## Setting up cycle trains in Nelson

Using the process we developed, six cycle trains were launched in Nelson, New Zealand in September 2006. A seventh one was launched in late November 2006. Most of these cycle trains proved to be self-sustaining, even after the two-month summer break. In fact, the programme expanded – another school engaged the process and set up a cycle train, and two further cycle trains were established in the trial schools.

## **Evaluating the Nelson trial**

A significant component of the cycle train trial is the evaluation of how well they worked. Ideally, this evaluation would be coupled with a quantitative assessment of the potential impact of cycle trains as an alternative method for children to travel to school and as a means of reducing traffic congestion. Unfortunately, too few cycle trains and participants were involved in the Nelson trial to be able to do a quantitative assessment. Hence, our evaluation focused on how well the process for setting up and operating them worked and what the participants thought about the cycle trains. Our qualitative evaluation involved the Safe Journey to Schools Coordinator, who was the coordinator of this trial; the cycle trainer who organised and ran the children's training sessions for all four schools; parent conductors from three different schools; and 20 children from Nayland Primary School riding on three different cycle trains.

Parents and children alike were enthusiastic about the cycle trains, saying they enjoyed the friendships, sense of community, and exercise. Knowing that the children were getting safely to and from school, and learning good cycling habits and road safety rules in a safe context (under adult supervision), were further benefits identified by parents.

The age restriction of '10 years or older', as stated in the draft guidelines, was considered to have limited the number of children participating on the cycle trains, even though in the end, most of the children riding on the cycle trains were 8 and 9 years old. In the surveys, some parents had commented on the problem of having one child old enough to join a cycle train and one too young, which meant the older one did not take part.

The Coordinator and conductors recommended making 'trail-gators' (devices that connect a child's bicycle to the adult's bike) and bike trailers available for parents to use for younger children, so that the pool of potential cycle train conductors and participants could be increased.

#### Conclusions

Our evaluation of the Nelson trial showed that the cycle trains were a success. Ten weeks after their launch in September 2006, 7 cycle trains involving 34 children were operating at 4 schools. That is, our simple approach, using a process similar to that adopted for implementing walking school buses, resulted in nearly 2% of the children at the trial schools regularly using cycle trains. A number of these children had previously been driven to and from school. Parents and children alike were enthusiastic about the cycle trains, saying they enjoyed the friendships, exercise and knowing that the children were gaining important cycling skills while getting safely to and from school.

Despite the suggestion in the original covering letter and safety guidelines that 'the preferred age of children on cycle trains is 10 years or older', only 13 (38%) of the 34 children participating in November 2006 were aged 10 or 11. The remainder were 7, 8 or 9 years old, with 8 years being the most common age (10 children, nearly 30% of all cycle train participants). The Coordinator noted that the younger children were very conscious of the rules, often telling the older ones off for poor signalling or ill-fitting helmets.

The cycle trains offered children aged 10 and younger, who knew how to ride a bike, the opportunity to practise their skills in a supervised, supportive environment. As recommended by the Land Transport New Zealand *Being roadsmart* document (endorsed by the Accident Compensation Corporation, Ministry of Education, and the New Zealand Police, among others), children under the age of 10 were riding with an adult who had responsibility for their behaviour and safety. Participating on a cycle train ensures that by the time children reach the age of 10 or 11, they are able to independently and safely ride their bikes in an on-road environment.

The ability to develop and implement cycle trains will be a useful addition as a tool within the school travel plan 'toolkit'. Cycle trains can be seen as a complement to WSBs because they appeal to a slightly older age group – WSBs are most popular with younger children (aged 5–8), while cycle trains appear to be more popular with children aged 8–11. This is similar to the experience overseas: children on cycle trains in Belgium are generally 8–11 years old.

As with WSBs, the process for setting up cycle trains requires the commitment of a coordinator, who could be a council employee, a parent, a member of the school staff, or someone else in the community. It is not reliant on limited school resources (either time or money), other than making a space available for meetings and for the children's cycle training session.

#### Cycle train guidelines

Based on the results of the Nelson trial, we refined the guidelines for establishing cycle train networks. Because of New Zealand-wide interest in the project, the guidelines *How to set up cycle trains: Help for schools and communities* are available to anyone interested in establishing one or a whole network of cycle trains.

A copy of the guidelines can be found in the Appendix. The guidelines are also available on the Pinnacle Research & Policy Ltd website (www.pinnacleresearch.co.nz).

# Abstract

A cycle train is similar in approach to the 'walking school bus' – adult volunteer 'conductors' cycle along a set route to school, collecting children from designated 'train stops' along the way. They are well established in Belgium and are beginning to appear in the United Kingdom. Previous research in New Zealand found a high level of interest in the cycle train concept, leading us to design and conduct a trial for implementing cycle train networks here.

Using the process and resource materials we developed after extensive consultation with key government stakeholders, six cycle trains were launched in Nelson in September 2006. Most of these cycle trains proved to be self-sustaining, even after the two-month summer break. In fact, the programme expanded – in early 2007, another school engaged the process and set up a cycle train, and two further cycle trains were established in the trial schools.

Our evaluation examined the characteristics of each cycle train in the trial, as well as focusing on how well the process for setting up and operating them worked. We interviewed the cycle train coordinator, cycle trainer, parent conductors and child cyclists, who all found the trial to be a success. Based on all of this input, we revised the resource material we developed for the trial so that it could be adopted and used throughout New Zealand.

# 1. Introduction

## 1.1 Context

As a result of our earlier research programme (funded through the Foundation for Research Science and Technology in 1999/2000), walking school bus (WSB) networks are now established in several hundred NZ schools – and this is continuing to grow. However, a significant number of children are still being being driven to and from school. Anecdotal New Zealand-based evidence suggests that as much as 20–40% of the early morning traffic stream is a result of this, and survey results from Victoria, Australia provide more concrete evidence that 'at 8.50 in the morning in term time, cars chauffeuring children to schools make up in the order of 20% of all cars on urban roads' (Morris et al. 2001). This suggests there is still room for substantial change in school travel patterns.

In 2002, we worked with the Energy Efficiency and Conservation Authority (EECA) and North Shore City Council on the 'Travelwise to School' pilot project on the North Shore, surveying the parent community to ascertain their interest in various alternative modes for their children's travel to and from school. We found that 87 of the 184 families who responded would allow their children to cycle to school in a group with another adult supervising their ride. One-third of these families offered to supervise the children on a rostered basis. This suggested that there was a high, albeit latent, interest in the wider community in what we call the 'cycle train'. In order to explore this interest, we sought and obtained funding for the cycle train demonstration research project in the 2005/06 financial year.

The cycle train follows the approach used for the 'walking school bus' (WSB), where adult 'conductors' walk along a set route to school, collecting children from designated 'bus stops'. The cycle train is essentially a 'walking school bus' on bicycle wheels.

Research on WSBs in Auckland by Kearns and Collins (2003) found that the average WSB route length (from 30 schools) was 1.18 km, and the maximum length was 2.25 km. Similar WSB route lengths have been found in Flanders, Belgium (R. Canters, pers.comm. 2007). This suggests that WSBs mainly appeal to those living up to 1 km, or not much more than 1 km, from their school. We expected that cycle trains would be of interest to those living further away from school, as well as to slightly older children.

Internationally, cycle trains (also known as 'bicycle pools') are increasing in popularity, a factor that gave our project credibility. Several schools in the United Kingdom have school-based cycle trains, and Hertfordshire Council has published some very basic guidelines for their development. In the United States, bicycle pools have been established for adults, primarily for commuting to and from work. (School-based cycle trains seem to be less common there.)

Flanders, the Dutch-speaking part of Belgium, is the area where school-based cycle trains are most widespread. The number of bicycle pools registered in that area increased from 172 during the school year 2001–2002 to 317 in 2004–2005, with an average of 4 bicycle pools per school (Mobiel21 2006). The number of children involved grew from 1432 to 2390 in the same period (a typical cycle train contains about 7 children). Each participating school had 20–25 children riding in bicycle pools and 5–7 'coaches' or conductors (Mobiel21 2006).

Mobiel21, the 'mobility management' expert (European term for travel behaviour change programmes) in Belgium and continental Europe, and the organisation that introduced cycle trains to Belgian schools, advised our New Zealand cycle train project on issues around establishing cycle trains – e.g. safety, training, liability, geographical factors, distances involved, etc.

# 1.2 Objectives

The aims of this research were to:

- develop guidelines, based on overseas experience, for setting up school-based cycle trains in New Zealand
- assess the level of interest in the community for using cycle trains as a mode of transporting children to school
- establish cycle trains in several schools and evaluate their success
- modify the New Zealand guidelines, based on the experience of the trials.

This report describes our trial of cycle trains in four schools in the Nelson City Council area in 2006.

There were three distinct stages to this work:

- establishing guidelines for setting up school-based cycle trains in New Zealand, based on overseas experience and advice from Mobiel21, the New Zealand Police, Land Transport New Zealand, etc.
- 2. setting up (surveying the school communities, analysing responses, mapping potential routes, holding training workshops, etc.) and launching the cycle trains at four schools in the Nelson area
- 3. evaluating the development, launching and operating processes for the cycle trains, and modifying the guidelines to reflect this experience.

Because of the limited number of schools and children involved in the trial, we were unable to undertake a full impact evaluation.

Section 2 of this report addresses the development of the process for setting up cycle trains and the New Zealand guidelines, while section 3 discusses the trial in Nelson. Section 4 examines our evaluation of the trial and section 5 presents the conclusions.

The Appendix contains the guidelines we have created for establishing cycle train networks, based on the results of the Nelson trial. The resource includes:

- guidelines for setting up the cycle train, for use by the person(s) coordinating the cycle train(s) within a school
- a letter to parents and a survey to identify those interested in participating in the cycle train
- a handout on the operation of the cycle train for parents, children and conductors
- a parental consent form
- a synopsis of the skills training session required for teaching children to ride in a cycle train.

These guidelines may be used to establish cycle trains anywhere in New Zealand.

# 2. Method

# 2.1 New Zealand cycle train trial methodology

There were seven steps in our proposed methodology for this trial and evaluation programme, namely:

- Clarify the conditions under which cycle trains were introduced in Flanders and the United Kingdom, and any lessons from them that could be applied in the New Zealand context.
- 2. Consult with the New Zealand Police, Land Transport New Zealand, Bikewise and local authorities to identify safety and liability issues, and how they could be addressed in developing the guidelines for the New Zealand cycle train trial. Finalise the process for establishing cycle trains within any given school, based on the guidelines process for the WSB network, plus additional issues such as safety, training, cycle maintenance, etc.
- 3. Use expert advice from the United Kingdom and Mobiel21, and New Zealand stakeholder consultation, to define the characteristics of suitable trial schools.

The information gathered in these three steps formed the core of the draft cycle train guidelines, including a 'cycle train safety audit' (risk assessment) to be completed by the school prior to the launch of a cycle train.

- 4. Develop a 'before' survey of the school community (parents and children) to facilitate later process and impact evaluation.
- 5. With at least one district/city council, identify up to six schools to participate in the trial, taking into account such factors as:
  - the issues identified in the first three steps above, which may include the target age group (if any), topography and traffic characteristics of roads around the school
  - the presence of a 'champion' in the school community who would assist with the programme
  - a mix of schools, considering their decile level, status (e.g. full primary/contributor, primary/intermediate), etc.
- 6. Send an introductory letter (on Council letterhead) to the school community explaining the trial. Administer the 'before' survey and trial the process of establishing a cycle train: i.e. survey the communities; identify routes using local knowledge (through meetings at schools) to identify hazards, etc.; train the children and volunteer leaders; obtain signed permission forms; and launch cycle trains.

7. Develop, administer, and analyse the 'after' survey to assess the short-term impacts of the cycle train and suggest any improvements to the process. In order to keep within the research programme's one-year time frame, the impacts were assessed two months after the launch of the cycle train.

## 2.2 Overseas experience and guidelines

#### 2.2.1 Oxfordshire

The Oxfordshire cycle train (Oxfordshire County Council 2002) operates in much the same way as a WSB. The primary difference is in the students it targets – i.e. those who live 1.5–3 miles (2.4–4.8 km) away from the school. The cycle train caters to all ages, from 5 years up. The rules are quite simple: be on time; cycle safely; no training wheels; and make sure the cycle is well maintained. The Oxfordshire County Council recommends that routes should be off-road cycle paths/lanes or quieter roads (preferably traffic-calmed) for most or all of the way to school. Children on the cycle train wear high-visibility vests.

#### 2.2.2 Hertfordshire

The Hertfordshire cycle train guide, published on the internet (Hertfordshire Environment Department 2004), has a quite general approach. For example, the three steps to the risk assessment are outlined as:

- considering what you intend to do
- listing the risks involved
- stating what you propose to do to reduce those risks and safeguard yourself and others.

This guide contains lists of 'precautions to be taken' (regarding the bicycles, adults as riders and conductors, children as riders and 'passengers', and route); as well as lists of 'points to consider' for the rules and conditions applying to a specific cycle train. Some contacts are provided. It suggests a number of specific measures to ensure that the risks for children are reduced, such as compulsory cycle safety training and agreement on a 'code of conduct'. While some important areas of advice for people wanting to establish a cycle train are missing (e.g. with whom they might need to work; the specific risks they should address; the process for establishing a cycle train and its route) the booklet provided a valuable starting point in developing guidelines for the New Zealand trial.

#### 2.2.3 Belgium

'Bicycle pooling' in Belgium has a more structured approach In the school year 2004–2005, approximately 80 schools were participating (Mobiel21 2006). Again, it is similar to a WSB, in that small groups of children (no more than 7 in any one 'pool') cycle to school under adult supervision along a set route (Mobiel21 2006; ROSE 25 2005).

Their system has clear rules about each child's place in the group and what to do when they are absent. The police, along with parents and children, check the route beforehand. The police also provide safety education, and each participant agrees to follow a specific set of traffic and social rules. Councils provide fluorescent jackets (to increase rider visibility) and resolve any liability issues. All participants are strongly advised to wear helmets, although this is not compulsory. The programme now provides a 'manual', video, leaflets and coaching (the material is in Flemish, but Mobiel21 staff provide English translations and advice).

The programme is successful in:

- promoting a unique combination of road safety education, environmental awareness, physical fitness, and mobility education
- creating the possibility for training children in small groups in real traffic, under safeguarded conditions
- providing on-going bicycle and road safety training.

# 2.3 Stakeholders' input into development of guidelines

#### 2.3.1 Composition of the stakeholder group

Originally, our stakeholder group included one representative each from nine organisations, including:

- the New Zealand Police
- the Energy Efficiency and Conservation Authority (EECA)
- Land Transport New Zealand
- Sports and Recreation New Zealand (SPARC)
- the Ministry of Transport
- the Ministry of Health
- the Health Sponsorship Council (responsible for Bikewise programmes in schools).

North Shore City Council and Community Sport Tauranga were included as areas/agencies with potential for establishing trials in schools.

## 2.3.2 Preliminary consultation

Based on the overseas material we had gathered, we developed an 'issues' document that attempted to identify all possible risks associated with the different elements of the cycle train (i.e. the cycles themselves, the adult riders, the child cyclists, and the route) and how they might be addressed. The document also proposed an 11-step process for setting up a cycle train in a school, and suggested rules for parents, children, conductors, and for cycling 'en route'.

Stakeholders were invited to evaluate the completeness of this work, and to propose existing material that could be used (e.g. safety training programmes). They were also asked to consider the criteria that made a school suitable for the cycle train trial.

#### 2.3.3 Development of draft set of documentation for the New Zealand trial

Following the input on this first document, including further consultation with Mobiel21 and the Oxfordshire peer reviewer, we devised a draft set of documents for the New Zealand cycle train trial. The draft documents included information on cycle train safety for parents, children and conductors; guidelines for setting up the cycle train (for use by the people coordinating the cycle trains within a school); and a one-page synopsis of the skills required for teaching children to ride in a cycle train.

The draft guidelines incorporated topics such as:

- reasons to set up a cycle train
- identifying a school suitable for one or more cycle trains
- how to 'network the school'
- some guidelines on route selection.

We also devised a survey for distribution to parents of children attending the school, to gauge their interest in participating on a cycle train, along with:

- a route planner to organise how and when the cycle train would operate
- a consent form for children to ride on the cycle train
- a route information sheet for parents and children, outlining the schedule and route of a specific cycle train.

#### 2.3.4 Subsequent consultation

Once we had outlined the specific details of how we proposed to operate the cycle train trial, there was a surge of interest in the project, and not only from the original stakeholders. There was a clash between road safety objectives, which appeared to largely pre-empt having children riding their cycles on roads (even if accompanied by adults), and other objectives that supported active transport (e.g. improving environmental sustainability, protecting and promoting public health, and improving accessibility and mobility). The project peer reviewers reported similar clashes in their countries.

The primary issues of concern were:

- the acceptable ages of children allowed to ride on a cycle train
- the acceptable ratio of adults: children on each cycle train
- the acceptable minimum number of 'conductors' leading the cycle train (either one or two adults, irrespective of the number of children riding)

• whether or not 'police vetting' of adult conductors should be compulsory, or left up to the individual school to decide.

Of these concerns, the issue that threatened to completely stop the trial was the age of children riding on the cycle train. The safety authorities insisted that only children aged 10 and above should be allowed to participate. While the concern about children's safety was understandable, this restriction would have severely limited the likelihood of a successful trial, as international experience showed that the most common age of riders on cycle trains was 8 and 9 years, and that younger children used them, too. Ten years old was more commonly the age of leaving a cycle train, rather than joining one, as the children gained enough maturity and skills to ride alone. This pattern would seem consistent with the following New Zealand cycle safety guidelines:

- 'That children under 10 should not ride on the road unless accompanied by a parent or another responsible adult' (NZ Police 2005)
- 'under 10s should always bike with an adult' (Land Transport NZ 2007)
- 'at about the age of ten, provided they have been taught how to cycle safely, children are usually ready to ride alone.' (Christchurch City Council 2005).

If New Zealand children are being told that they can cycle independently from the age of 10, then why would they want to be on the cycle train? We expected that some children aged 10 or 11 would join the cycle trains, largely for the opportunity to practise their on-road cycling skills in a supervised setting, as a stepping stone to being allowed to cycle independently in the future. Another attraction would be the novelty factor, given that cycle trains are a new concept in New Zealand. The cycle trains provide an ideal opportunity for younger children (and older ones who have not previously had the opportunity) to develop skills to cycle safely – for a lifetime.

Obviously, as the project developers and administrators, we did not want to have anything untoward happening to the children participating in the trial. We believed that our proposal validated the existing worldview (that children under the age of 10 should cycle with an adult) and actually increased their safety in a number of ways: greater numbers and higher visibility of cyclists; training for the children and the conductors; high-visibility clothing; and having children riding in supervised, well-structured groups on audited routes.

During the period we were consulting on the draft documentation for the trial, our initial stakeholder group grew to include contributors from other organisations such as Hamilton City Council, Educating New Zealand, Auckland Regional Council, Auckland City Council, Waitakere City Council and Hutt City Council. Several organisations had more than one person contributing to the discussion. At one stage, more than 30 people were included on the email distribution list.

It took several months to negotiate a balance between the issues of encouraging children to engage in active transport while also ensuring their safety. In the end, it was agreed that for the trial:

- The preferred age of children on cycle trains was 10 years or older, but exceptions could be made for younger children (aged 8 or 9) who demonstrated good cycling skills.
- There would be one adult conductor for every 3–6 children. The higher ratio (one adult to six children) would only apply to cycle trains at intermediate schools or where the children were all older than 10 years. The ratio would be decided by the families on each cycle train and would vary to suit traffic conditions, the confidence of the conductors, and/or the ages of the children.
- Depending on the skills and number of children, a cycle train could operate with only one conductor.
- Police vetting of conductors, or some other similar vetting procedure, was encouraged but not mandatory.

The controversy affected the willingness of some district councils to participate in the trial. Three councils adopted a 'wait and see' attitude, saying they wanted to see how it went elsewhere before trying to establish cycle trains in their own area.

# 3. Setting up cycle trains in Nelson

# 3.1 Introduction

As noted in the previous section, several city councils were originally interested in the possibility of trialling cycle trains in their areas. In the end, however, Nelson City Council was the only one prepared to conduct a trial.

The (then) Safe Journey to Schools Coordinator at Nelson City Council (NCC), Krista Hobday, was very enthusiastic and supportive of the cycle train concept. She approached five schools about the trial, and all five agreed to take part. Her relationship with the schools was such that it only took an email to each school to engage them in the project. There were four primary schools (Nelson Central, St Joseph's, Victory and Nayland) and one intermediate (Nelson Intermediate). All have a roll of approximately 400–440 students, except for Victory Primary, which has a roll of 290. Tahunanui Primary School (with a roll of approximately 330 students) joined the trial in February 2007.

# 3.2 The parent survey

## 3.2.1 Distribution and collection of the survey

In each school, the survey was distributed on their regular 'newsletter day', along with a covering letter signed by the Safe Journey to Schools Coordinator (see the Appendix). As parents expected to receive a newsletter on that day, this maximised the likelihood that each family would receive at least one questionnaire. Ten days were allowed for its completion and return to the school office. A reminder notice was inserted in the school newsletter to maximise the response rate.

Because the protracted debate about safety issues had delayed the start of the trial, it was May and June 2006 by the time the first parent surveys went out to the five Nelson schools – the early days of winter, when the weather was cold and rainy. Also, these were the last 2–3 weeks of the school term. The Coordinator felt that both these factors contributed to a low response rate from all of the schools. Based on her previous experience with school travel plan development and setting up WSBs, she recommended distributing the surveys at the beginning of Term 1 (the summer term) or Term 4 (the spring term), when the weather is generally better and parents may have more incentive or time to respond. However, when Tahunanui Primary School joined the trial with a survey early in Term 1, 2007, there was very little difference in the overall response rate compared with those schools surveyed during the winter months of 2006.

#### 3.2.2 Response rate

З.

In the WSB network trial that we conducted in 1999/2000 (O'Fallon et al. 2001), the response rate from interested families had been much higher than from those who were not interested (231 children wanted to participate, 136 did not). However, in the cycle train survey, the response rate from families who were *not* interested in participating was much higher than that of families who *were* interested, for a number of reasons (see section 3.2.4).

School	Total number of surveys returned	Families interested	Families not interested
Nayland	56	31	25
Tahunanui	30	6	24
Nelson Central	38	16	22
St Joseph's	35	8	27
Victory Primary	27	7	20
Nelson Intermediate	32	13	19
Total	218	81	137

 Table 3.1
 Response rates to initial school community survey (by school).

Eighty-one families across the 6 schools expressed interest in having their children participate in the cycle trains. Given that more than 2000 children attend these 6 schools, it can be said that initially about 5% were interested in being on a cycle train.

## 3.2.3 Characteristics of potential cycle train users and conductors

# 3.2.3.1 Number and availability of potential child cyclists and volunteer conductors

As shown in Table 3.2, the 81 families expressing interest in the cycle trains originally identified 105 potential cyclists and 30 volunteer conductors – a ratio of nearly 1 conductor per 3 children. However, conductors were not always located in the same area as the children (e.g. Tahunanui School had no volunteer conductors for their 10 interested children). Also, when they were contacted only a week or two after the questionnaires had been collated, many adults had changed their mind about volunteering to help run a cycle train. Likewise, when parents were contacted about their children joining a cycle train, a number had changed their mind.

School	Volunteer conductors	Potential child cyclists	Ratio of conductors to children
Nayland	14	43	~1:3
Tahunanui	0	10	-
Nelson Central	8	22	~1:3
St Joseph's	2	11	~1:5 or 1:6
Victory Primary	2	7	~1:3 or 1:4
Nelson Intermediate	4	12	1:3
Total	30	105	~1:3

 Table 3.2
 Children and adults wanting to be part of a cycle train.

Originally, parents had indicated that:

- 44 children could potentially use the cycle train 5 mornings and afternoons per week
- 16 children might use the cycle train in the morning only, anywhere from 1–5 times a week (the respondents did not indicate how they intended the children would travel from school to home)
- 35 children could use the cycle train from 1–4 mornings and afternoons per week.

The exact use of the cycle train by 10 children was not specified on the survey form by their parents.

Obviously, a minimum of one conductor is required to operate a cycle train for one 'return trip' (morning and afternoon) per week. In the trial, 19 of the 30 parents willing to be conductors volunteered to do so for 1–2 mornings or 1–2 afternoons per fortnight. This meant that up to 4 volunteers would be required in order for a cycle train to operate *one* return trip per week. There was no area where more than one or two parents volunteered to conduct the cycle train. Both the limited number and restricted availability of volunteers affected the feasibility of establishing some cycle trains.

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#### 3.2.3.2 Current mode of travel to and from school

Forty-three percent of the children whose parents indicated they were interested in joining a cycle train were usually driven to school, and 41% were driven home (the other 2% walked home). This is a positive indication that establishing cycle trains could contribute to reducing traffic congestion near schools.

Just over half of the children who might use the cycle train already either cycled (23%) or walked (29%) to school on their own, or with friends or siblings, or with their parents.

#### 3.2.4 Cycle train non-users

Clearly, it would be of greater interest to the families who wanted to become part of the cycle train scheme to complete the survey and return it to their school. Despite this, 63% of the surveys returned to the schools were from families saying that none of their children would use a cycle train if it was organised from their street.

#### 3.2.4.1 Reasons for not wanting to join a cycle train

Respondents were asked an open-ended question about their 'particular reasons' for not using the cycle train. The primary reasons for non-interest were that their children were younger than the ages mentioned in the covering letter, or that their children already walked or cycled to school. Fourteen of the 137 families who were 'not interested' in the cycle train said that the age restriction (i.e. 'the preferred age of children on cycle trains is 10 years or older') meant that their family had one child who could participate and one who could not, so they chose not to have any of their children use the cycle train.

Table 3.3 below summarises the responses for the six schools.

Particular reasons for not using cycle train	Nelson Inter	Victory Primary	Nelson Central	St Joseph's	Nayland Primary	Tahunanui	Total
Already walk/bike/prefer walking	8	1	12	3	3	2	29
Too young		10	4	7	5	1	27
Live too close to school	2	4	3	6	5	1	21
Live too far from school	3	2	2	5	3	6	21
Not safe/roads difficult to cross	4	4	1	1		1	11
Not enough cycle skills/confidence			3	1	5	1	10
Take the bus	6			1			7
Other commitments/after school activities		1		3	1		5

Table 3.3	Responses to the question 'For what particular reasons wouldn't your family
	use the Cycle Train?'

Taking younger kids anyway so easier to all travel together			1	1	2		4
No bike	2	1			1		4
Variable timing ready for school				1	1	1	3
Other (going abroad/too cold/carpool)	1		1	2			4
Total no. of responses <sup>(a)</sup>	26	23	27	31	26	13	146

(a) A few parents gave more than one reason for not using a cycle train

# 3.3 Creating the cycle train routes, schedules and conductor rosters

After completing the initial data entry, the Coordinator examined the questionnaires of those interested in joining a cycle train, and/or in conducting a cycle train, and went through the following process of establishing possible routes (as outlined in the trial process manual):

- 1. Sorted the questionnaires, alphabetically, by street name.
- 2. For each school, used a large-scale 'waterworks' map of the surrounding area (showing each section and section/house number, along with street names) and marked the location of the children and adult volunteers, to establish the areas where there was sufficient interest to establish a cycle train, and its potential route. (If a GIS programme is available, this mapping could be done electronically.)
- 3. Gave each potential route a name, or a letter or number, and wrote it on the relevant individual questionnaires.
- 4. Collated the information for each route group, with the details about each child (age, address, phone number, room number at school, and anticipated usage of the train) and each adult volunteer (address, phone number, and possible 'conducting' times).
- Contacted the parents who had volunteered to conduct trains to check whether they were still willing to assist. Several had reconsidered their availability, with the net result that it was possible to create six cycle trains at four schools in early September 2006.
- 6. Prepared and distributed a simple two-page handout detailing the routes, schedule, names, ages and addresses of children, the conductor roster and contact details to families potentially involved on each cycle train. In addition, the Coordinator sent out a handout covering the basic cycle train safety rules for parents, children and conductors, and asked the parents to complete and sign a consent form to allow their child/ren to ride on the cycle train. (Examples of this material are contained in the Appendix.)

7. Telephoned every family and conductor with the details of the children's training session and the proposed launch of their cycle train.

In other areas, it may be necessary to finalise the route of the cycle train after completing a 'hazards audit' of the potential route, taking into account the children riding on the cycle train. This was not necessary in Nelson, as the Coordinator had been highly involved in school travel planning processes, including the development of cycle lanes/paths, prior to introducing the cycle train concept to the schools. She did contact the Council engineers about a couple of minor issues to see if they could be addressed prior to launching the cycle trains. Usually, either the cycle train coordinator or the conductor(s) should cycle the route, bearing in mind the way a smaller child would feel about various aspects of it. It is useful to take photographs of any issues that are identified, preferably crouching down to take the photo from the perspective of the child.

At the end of the process of establishing routes, not all of the potential child cyclists were able to take part in a cycle train for the following reasons:

- not enough children/families in a given area
- children and volunteer conductors living too far apart
- not enough volunteer conductors in a given area.

## 3.4 Meetings with the school community

The Coordinator of the Nelson trial chose not to hold meetings with each school community because of the small number of actual cycle trains and cycle train users. In retrospect, we realise that there were still good grounds to advertise and hold a meeting within each school community, even if only one cycle train could be launched there.

Our previous research on establishing WSB networks had revealed a number of benefits from meetings with interested parents/families: the meetings attracted some extra families who had not responded to the initial survey but now wanted their children to use a WSB, and additional volunteer conductors were recruited at the meetings (O'Fallon et al. 2001). The meetings also allowed further explanation of the WSB concept and gave parents the chance to ask questions or air concerns. At these meetings, which usually lasted between 1 and 1½ hours, we gave families the opportunity to organise how the WSB would operate in their area, including its probable route, days and time of operation, pick up/drop off points, and conductor roster. This increased the community's sense of 'ownership', as well as taking advantage of their local knowledge to minimise problems.

In the case of establishing cycle trains, these meetings might be shorter as there are usually fewer people and routes involved.

## 3.5 Conductor training

Because there were fewer than five volunteer conductors at the beginning of the Nelson trial, the Coordinator met with each person individually (rather than run a formal workshop session) to go over cycle train and road rules, routes, what to do in an emergency, etc. A number of the parents were already cycling to school with their own children and so were familiar with how to handle children on the road and footpaths.

Conductors were not provided with any formal cycle (riding) training, as all of the volunteers were confident cyclists and had been riding with their children to school on at least some occasions. They were, however, encouraged to attend the children's training session in order to meet the children on their cycle train and get a sense of their capabilities, and to address any concerns they had.

By the end of Term 4 (2006), 8 conductors were involved with the 7 cycle trains operating in 4 schools.

## 3.6 Children's training session

A professional cycling trainer led  $1-1\frac{1}{2}$  hour training sessions for the children on the school grounds at each school. In addition, one school held an on-road training session for one hour. The cycle trainer did not ask the children to do a trial ride of what would be their usual cycle train route because in most cases, parents were riding with their children as conductors. If larger numbers of children became involved in the cycle train programme at a later date, on-road training would become a regular feature of the cycle training.

The training session was also used to complete a bicycle safety check for each child. The trainer and Coordinator checked the bicycle seat height (i.e. with their bottom on the seat, the child should be able to touch the ground with their tiptoes), the chain tension, the fit of the bike helmet, and that the child knew how to start off correctly (i.e. pedal up in line with the tubing, so that their body weight could help them to push off). Children were also advised about the appropriate clothes and shoes to wear when riding on the cycle train.

The training workshops occurred during regular school hours to ensure the children could attend, without after-school commitments interfering with the children's participation. The Coordinator tried to ensure that no children were away on school camps or other activities when the training was being held.

Full details of what was covered in the training session are provided in the Appendix.

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## 3.7 Launching the cycle trains

During the winter, while she was still in the process of surveying the school communities and working out potential cycle train routes, the Coordinator arranged for a local free newspaper to advertise that Nelson City Council were about to trial cycle trains in several schools, and that this was a 'first' for New Zealand. Following this article, Manchester Unity Friendly Society contacted the Coordinator about providing high-visibility fluorescent vests for the conductors, and backpack covers for the children on the cycle trains. These serve multiple purposes, especially making the cyclists more visible to drivers (and thereby improving safety), and creating a higher profile for the cycle trains in the surrounding community.

The Coordinator was very proactive in promoting the cycle trains, both within the specific school communities – through regular notices and photos in the school newsletters – and in the broader Nelson area. Before the cycle trains were launched, several articles in the local Council newspaper *Live Nelson* and in a free Nelson weekly newspaper promoted the cycle train concept. They encouraged anyone interested in volunteering to assist with a cycle train, or to set one up, to contact her at the Nelson City Council.



#### Figure 3.1 Cycle train in action.

The Coordinator also organised publicity for the launch of each cycle train, including additional newspaper articles, and she rode with each cycle train on its first morning.

# 4. Evaluating the Nelson trial

A significant component of the cycle train trial is the evaluation of how well they worked. Ideally, this evaluation would be coupled with a quantitative assessment of the potential impact of cycle trains as an alternative method for children to travel to school and as a means of reducing traffic congestion. Unfortunately, there were not enough cycle trains and participants in the Nelson trial to allow this quantitative assessment.

# 4.1 Structure of the qualitative evaluation

As well as examining the characteristics of each cycle train in the trial, our evaluation focused on the process for setting up and operating them, and what the participants thought about the cycle trains. It questioned the people who were active participants in the trial, namely:

- the Safe Journey to Schools Coordinator
- the cycle trainer who organised and ran the children's training sessions for all 4 schools
- 4 parent conductors from 3 different schools
- 20 children from Nayland Primary School riding on 3 different cycle trains.

The qualitative evaluation took the form of individual interviews with some of the participants (the Coordinator, the trainer, and one of the conductors), and group discussions with others (the child cyclists, and three conductors). We designed a question guide to focus the interviews and discussions and to maximise their value.

Our report focuses on various aspects of the cycle train trial, rather than on the individual interviews and discussions.

# 4.2 Characteristics of the cycle trains

A total of 6 cycle trains were launched in September 2006. Initially, most trains operated for only 1 day a week, and 2 of them operated only in the morning (meaning that the children had to make some other arrangement for the afternoon). By late November, some of the cycle trains were operating 3 days per week and an additional cycle train had been established at Nayland Primary School.

In the initial survey of the 5 schools, 95 children were available to join a cycle train, and approximately 60% of them could have been accommodated in those 6 original cycle trains. However, in late November 2006, only 34 children (36% of the original total) were involved in 7 trains, as shown in Table 4.1. We were unable to discover the reasons for this reduction in numbers.

School	Number of trains	Number of children participating
Nayland	<sup>(a)</sup> 4	21
St Joseph's	1	7
St Joseph's/Nelson Central	<sup>(b)</sup> 1	4
Nelson Intermediate	1	2
Total:	7	34

Table 4.1 Number of cycle trains and child cyclists in November 2006.

(a) One started in Nov 2006.

(b) Central School and St Joseph's have a combined cycle train that stops at both schools.

Despite the suggestion in the original covering letter and safety guidelines that 'the preferred age of children on cycle trains is 10 years or older', Table 4.2 shows that only 13 of 34 children (38%) participating in November 2006 were aged 10 or 11. The remainder were 7–9 years old, with 8 years being the most common age (nearly 30% of all cycle train participants). Ironically, the Coordinator noticed that the younger children were very conscious of the rules, often telling the older ones off for poor signalling or ill-fitting helmets.

Age	Number of children				
5					
6					
7	6				
8	10				
9	5				
10	8				
11	5				
Total:	34				

Table 4.2 Ages of children cycling on cycle trains in November 2006.

Some cycle trains operated with a single conductor riding with 2–6 children. One cycle train, where the route was all off-road and some of the children were aged 10, and were already cycling to school on their own, sometimes had more than 6 children with 1 adult. Two of the on-road cycle trains operated with 2 conductors for 7 children.

Despite the recommendation in the cycle train guidelines, none of the schools conducted any police or other vetting procedures. All of the volunteer conductors were parents of children using the cycle trains, apart from the Coordinator, who worked for the Nelson City Council.

# 4.3 The Coordinator's evaluation

### 4.3.1 Comments on the process

The Coordinator noted that having an established relationship with a school made it much easier to 'sell' the cycle train concept to the principal, and to get permission to access the parent community through school newsletters, use school facilities for meetings, training, etc. Teachers were informed about the project but did not need to be directly involved, which minimised the impact of the trial on school resources.

The Coordinator recommended trying to get publicity and photos about the cycle trains into every issue of the school newsletter to maintain awareness about them, or even establishing a separate cycle train newsletter. It would be helpful to know how often the school newsletter goes out, so that the timing of the process could be established. She felt the process should be initiated near the beginning of term, when parents are 'fresh' and more likely to respond to the survey. Also, this would mean the cycle trains could be launched either in the same term or right at the start of the following term.

She recommended devising promotions or advertisements to encourage:

- children to join a cycle train
- parents to be conductors
- the use of 'trail-gators' (devices that connect a child's bicycle to the adult's bike).

She estimated that the process of setting up cycle trains took less than 15 hours in each school. The biggest time commitment was in organising cycle train routes and then contacting everyone to make sure they still intended to participate on the cycle train.

## 4.3.2 Comments on the operating guidelines

The Coordinator noted the importance of the training sessions as a means to ensure that the children had at least the basic riding skills, including knowing how to stop and use hand signals, prior to riding on the cycle train. She found several cases where a child was already riding to school without any cycle safety training and/or without adult supervision. The Coordinator thought that the cycle train was one way of ensuring such children gained and developed the appropriate skills to cycle safety to school.

She said the preferred adult: child ratio in a cycle train would depend on the children's ages and skills; the nature of the route (e.g. on- v. off-road, the 'busy-ness' of the road); the confidence and ability of the conductor, and so on.

How often a cycle train operated – including whether it went both in the morning and the afternoon of the same day – would depend on what the families participating in the cycle train were comfortable with; how often children could ride on the train; and when parents could lead it. The Coordinator noted that there can be no hard and fast rules in this respect; rather, there is a need to be flexible and recognise that each cycle train is unique.

## 4.4 The cycle trainer's evaluation

The feedback from the cycle trainer on specific skills and checks has been incorporated into the guidelines document, *How to set up cycle trains: Help for schools and communities* (see the Appendix).

In particular, the cycle trainer noted the following points:

- It works well to 'buddy up' a young child with an older child, as the younger ones 'tend to follow like ducklings'.
- Slow riding is very good for bike skills and should be included in the training session, along with practice in braking, hand signals, riding in single file; riding through an obstacle course; and riding over 'bits and pieces' (to emulate potential road conditions, such as debris on the road).
- When teaching the hand signals for stopping and turning, it is important to remind the children to put their hands back on the handlebars before they execute the stop or turn.
- Children should be taught to ride on the white line that marks the edge of the road, rather than completely to the left of the line, so they are more visible in traffic.

If any conductor(s) could not attend the children's training session, the trainer thought the cycle train coordinator should attend it and provide feedback to the conductor(s) about individual children's strengths and weaknesses.

## 4.5 The volunteer conductors' evaluation

#### 4.5.1 Accommodating conductors with small children

One difficulty that arose early in the process was the situation of adult volunteers who were keen to help run a cycle train, but had younger children, generally pre-schoolers, who were not capable of riding a bike on their own. Three possible solutions to this problem were discovered during the trial:

 The use of 'trail-gators', as used in some schools in the United Kingdom. These are devices that connect a child's bicycle to the adult's bike, so they can safely ride together (see Figure 4.1). With financial assistance from Pinnacle Research & Policy Ltd, the Coordinator purchased four trail-gators from a local bike shop, whose manager agreed to fit them, for no cost, to the parents' bikes. The trail-gators were loaned, at no charge, by the Nelson City Council to parents with younger children (aged 4–7 years) so that the child could be brought on the cycle train. They are relatively inexpensive (approximately NZ\$175) and once they have been fitted, they are easy to disconnect/re-connect.



Figure 4.1 The 'trail-gator' joins two bikes together.

The Coordinator noted that the parent and the child need to practise using the trailgator prior to going on the cycle train, and it is essential that the trail-gator is fitted properly. Cycle train coordinators should also try using a trail-gator so they can advise parents on its use.

2. An option for parent volunteers who have toddlers is to use a 'bike trailer', such as the one shown in Figure 4.2, which comes with seatbelts and seating for two small children These cost approximately NZ\$500.



Figure 4.2 Example of a bike trailer for small children.

3. Another alternative for children under 4 years is a bike seat that attaches to the rear frame of the parent's bike.

The conductors supported the use of trail-gators and bike seats to make it easier for people with young children to participate. One child was already using a trail-gator and loved it, as it reduced the strain of pedalling. They suggested adding a question to the survey: 'If trail-gators were available, would you use them?'

#### 4.5.2 Comments about the operating guidelines

Conductors felt that while the safety guidelines were useful, it would be good to 'trim them down'.

The basic rules that the conductors used were:

- Ride in single file.
- Don't overtake.
- Keep to the same order (although in some instances, older and/or more responsible children were allowed to take turns being at the head of the cycle train).
- Keep good spacing so that riders do not bunch up.
- Get off bikes to cross roads.

Generally, the children were well behaved on the cycle trains and only needed occasional reminders of the operating rules.

The cycle train guidelines suggest that conductors carry, at a minimum, a cell phone in case of emergency. However, the conductors in the Nelson trial, which was operating in well-populated suburban areas, did not focus on equipment they might carry – this could include a cell phone, puncture repair kit, and/or tyre pump.

The conductors found that some parents were very slow to have their child's bike fixed, when necessary, or to have regular maintenance checks. They suggested running a 'repair clinic' at the school once a term, attended by either the parents or personnel from a bike shop, for maintenance and minor repairs.

#### 4.5.2 What conductors liked about leading the cycle train

The three Nayland School conductors we interviewed described the cycle trains as 'fantastic', especially for children who used to be driven to school. They observed that 2 km was too far for a 7-year-old to walk, but not too far for them to cycle in supervised conditions.

Other positive comments included:

- Parents know their children are safe and supervised on their way to school.
- Conductors get exercise for themselves.
- A cycle train is an on-road training ground for both adults and children.
- Children who were previously not allowed to cycle to school could now do so.
- It empowers children to get out onto the 'scary' road.
- It's healthy to get out into the sunshine and fresh air.
- The presence of cycle trains encourages other road users, particularly drivers, to behave better for example, by not overtaking cyclists.

The conductors felt that being on a cycle train provided an opportunity to teach children road rules from an early age and while they were still interested in following such rules. The conductors observed that many children lose interest in being told what to do as they get older, so it is important to use this 'window of education' to provide good life-long habits and skills. They felt the cycle train provided children with an opportunity to develop cycling skills and keep practising them on a regular basis.

### 4.5.3 Problems encountered by conductors

The conductors at Nayland School encountered some problems regarding the etiquette of sharing a bike/pedestrian path, particularly when local college students walked five abreast and occupied the whole path. They suggested that the Council should do some promotion or awareness-raising activities around how the shared path is to be managed by users. Apart from filling up the path, the college students tended to respect the cycle trains.

With respect to the general operation of the cycle train, conductors noted that it could be difficult for children (and adults) to cycle in heavy wind. Most cycle trains did not operate if it was raining. The low numbers of volunteer conductors also caused problems if the conductor was ill and could not ride with the train. In one case, the conductor's partner/spouse acted as a back up, but if no one else was available, the cycle train had to be cancelled for that day.

Generally, the conductors did not encounter much difficulty with punctuality in the morning – although one conductor sometimes found it stressful to get herself organised in time! In some schools, the location of bike racks delayed the departure of the cycle train in the afternoons. The conductors suggested that schools might let children on cycle trains and WSBs leave five minutes early, so they could meet and get organised before the 'hordes' got out.

The conductors noted that having secure facilities for bicycles at school was an issue. The risk of bike theft made some parents reluctant to let their child/ren ride to school, and some schools wouldn't let children cycle if they didn't have a good bike lock. It can be a 'chicken and egg' situation: we feel that if a school community wants to encourage cycling, it needs to consider fund-raising for bike racks prior to establishing cycle trains or other cycling measures. Alternatively, an unused room in the school could be designated as a locker room for bikes.

## 4.6 The children's evaluation

## 4.6.1 Their awareness of safe cycling rules

The children interviewed were asked 'What are the rules of your cycle train?' They gave a very extensive list of rules (far more than the basic six rules in the guidelines), thereby demonstrating some of what they had learned by participating on a cycle train.

The rules they gave were:

- Wear a helmet.
- Check that shoelaces are tied and clothes are tucked in.
- Wear trousers, not skirts.
- Watch your pants legs.
- Always be on good behaviour.
- Ride in single file.
- Leave a gap.
- Use hand signals.
- Have good brakes.
- Give way.
- Ring your bell to let people know you're there.

Interestingly, only about half the children interviewed thought they had learned things about road safety from riding on a cycle train.

#### 4.6.2 What they liked about being on the cycle train

The children were asked what they liked best about riding in their cycle train. Responses included:

- Making new friends and seeing new places.
- It's environmentally friendly.
- It's good exercise.
- You get to use your bike more.
- You get to ride to school.
- You get lots of fresh air.
- Some get to be leader.

As well as the positive comments from the children, some parents said their child would now be allowed to ride to school on their own, since they had been on the cycle train. This is a successful outcome of the project: it shows that by going through the cycling stages – i.e. learning how to cycle, riding on the road in groups – parents and children become more confident about individual cycling.

#### 4.6.3 What they didn't like about being on the cycle train

The children were also asked to share what they disliked about riding in the cycle train. Some did not like the rules about riding single file and having to maintain the same order each day – they wanted to be able to cycle next to or near a friend. Some were afraid of bumping into someone else if there was not enough space between bikes. The children complained that sometimes college 'kids' got in the way when the cycle train was on the shared path. They were also annoyed if children turned up late for the cycle train and had not let the conductor know.

There were some conflicting views on the fluorescent backpack covers. Some children thought they were 'embarrassing' and 'dumb', while others said they helped them 'be proud' to be part of the cycle train. The range of comments about these covers suggests a need to promote such gear as part of being 'cool' and 'safe'.

#### 4.6.4 How they would promote the cycle train to others

The children were asked 'If you were going to make an ad about cycle trains, to get your friends to ride on one, what would you want to say?' In response they said, 'Join the cycle train, it's

- a healthy way to get to school,
- fun, and
- not wasting fuel.'

#### 4.7 Medium-term longevity of trial cycle trains

In February 2007, following the summer break; the Tahunanui School community was surveyed for interest in having cycle trains. As a result, one further cycle train was established there, with the Coordinator acting as conductor, since no parents volunteered.

Some of the previous year's cycle trains began operating again at the beginning of the new school year. However, some of the older children now wanted to cycle independently – they didn't want to be seen with adults or wear the high-visibility backpack covers. It seemed that fluorescent was no longer 'cool'. One option to address the children's concern, if it is a reason that they are leaving or not joining the cycle train, could be to have the adults wearing high-visibility vests, younger students using the fluorescent backpack covers, and older children wearing ankle reflectors or a high-visibility sash. This would teach the children that the group needs to be visible and that there are different ways of achieving this.

At the same time, some WSBs that were operating in 2006 were converting to cycle trains, as the older children now wanted to cycle to school instead of walk. At one school, where two of the WSBs became cycle trains, the parents were quite proactive in working out safe routes and asking the Coordinator for the fluorescent backpack covers and advice.

#### 5. Conclusions

#### 5.1 The trial process and evaluation

Our work in 2002 with schools in North Shore City had found that 87 of 184 families would allow their children to cycle to school in a group with another adult supervising their ride, i.e. on a cycle train. At the same time, cycle trains were being started up in Flanders, Belgium and the United Kingdom, as an alternative to the WSB. These two factors prompted us to undertake to design a process to implement cycle train networks, and evaluate their impacts, in New Zealand schools.

Following extensive consultation with key government stakeholders, we developed a set of resources to trial the cycle train concept in New Zealand. The process for establishing cycle trains is somewhat more complex than that used for WSBs, given the greater safety issues around having groups of children cycling on the road. Hence, more detailed safety guidelines, a bike and helmet check, and a skills training workshop for the children form part of the cycle train resources.

Using the resources we developed, six cycle trains were launched in Nelson, New Zealand in September 2006. A seventh one was launched in late November 2006. Most of these cycle trains proved to be self-sustaining, even after the two-month summer break. In fact, the programme expanded – another school engaged the process and set up a cycle train, and two further cycle trains were established in the trial schools.

The cycle train trial was a clear success. Ten weeks after the September 2006 launch, 7 cycle trains involving 34 children were operating at 4 schools. That is, our simple approach, using a process similar to that adopted for implementing WSBs, resulted in nearly 2% of the children at the trial schools regularly using cycle trains. Our evaluation of the trial revealed that a number of these children had previously been driven to and from school. In interviews and group discussions, parents and children alike were enthusiastic about the cycle trains, saying they enjoyed the friendships, exercise and being 'environmentally friendly'. Parents especially liked knowing that the children were gaining and developing important cycling skills while getting safely to and from school.

The ability to develop and implement cycle trains will be a useful addition as a tool within the school travel plan 'toolkit'. Cycle trains can be seen as a complement to walking school buses, because they appeal to a slightly older age group – WSBs are most popular with younger children (aged 5–8), while cycle trains appear to be more popular with children aged 8–10 or 11. This is similar to the experience overseas: the ages of children on cycle trains in Belgium is generally 8–11 years (Mobiel21 2006).

The cycle trains offered children aged 10 and younger, who knew how to ride a bike, the opportunity to practise their skills in a supervised, supportive environment. As recommended by the Land Transport New Zealand *Being Roadsmart* document (endorsed by the Accident Compensation Corporation, Ministry of Education, and the New Zealand Police, among others), children under the age of 10 were riding with an adult who had responsibility for their behaviour and safety. Participating on a cycle train ensures that children reaching the age of 10 or 11 are able to independently and safely ride their bikes in an on-road environment.

By operating in this manner, cycle trains provide an important developmental stage before independent cycling. If children can be trained as confident cyclists both on- and off-road, it provides them with greater choices for their travel as they go through life. This project has shown that by going through the cycling stages – i.e. learning how to cycle, riding on the road in groups – parents and children became more confident about children cycling alone, and children who otherwise were not allowed to cycle were allowed to do so after participating on the cycle train.

Cycle trains are also more suitable for children who live further away, at a distance where walking becomes less of an option.

Within the wider community, cycle trains help to raise awareness of cycling in general and, in particular, raise the profile of children cycling on the roads. Increased awareness and acceptance of cycling in the general population will facilitate its growth as a transport mode overall, with beneficial implications for issues such as health and traffic congestion.

#### 5.2 Guidelines for establishing cycle trains

Based on the results of the Nelson trial, we refined the guidelines for establishing cycle train networks. Because of New Zealand-wide interest in the project, the guidelines *How to set up Cycle Trains: Help for schools and communities* is available to anyone interested in establishing cycle trains (see the Appendix, or the Pinnacle Research & Policy Ltd website www.pinnacleresearch.co.nz).

These guidelines outline a clear and simple process for setting up cycle train networks, or even just one cycle train. They also provide helpful hints for successful cycle trains, tips on how to keep a network going, and where to go for help. The booklet contains all of the forms that are required in the process, including a letter introducing the cycle train concept to parents, a survey form for the school community to gauge interest in cycle trains, and route scheduling forms.

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Appendix: Cycle Train guidelines

## How to set up Cycle Trains: Help for schools and communities

Prepared by Carolyn O'Fallon Pinnacle Research & Policy Ltd Wellington, NZ

February 2008

## How to set up Cycle Trains: Help for schools and communities

This booklet will tell you how to set up one Cycle Train, or an entire network, in your school – just follow the step-by-step instructions and get cycling!

#### How does a Cycle Train work?

Each Cycle Train runs along a set route, with at least one adult 'conductor' picking up children at designated 'Train stops', and cycling with them to and from school. Some Cycle Trains pick up children from outside their house, while others have stops for children to meet up with their Cycle Train. The process is then reversed in the afternoons.

The Cycle Train can be flexible to suit the needs of the families using it. The Cycle Train can go as often as parents want to 'conduct' it, and children can use it every day, or once a week, according to their family schedules. And it's free!

#### Why set up a Cycle Train?

There are lots of reasons to start a Cycle Train network at your school. The Cycle Train:

- Means fewer cars on the roads around the school and a safer environment for children;
- Allows children the chance to practise and develop cycling skills within the safety of cycling with other children and adults;
- Gives children a sense of **independence** while 'being a part of a team' cycling to school;
- Provides a **safe, non-polluting,** and **convenient** alternative for children travelling to and from school;
- Allows children and adults to get fresh air and exercise;
- Encourages a **sense of community** as families get to know each other and their children become friends; and
- **Parents gain 'free time'** when they don't have to accompany their children to school every day.

#### One of the Nayland Primary School (Nelson) Cycle Trains



#### What schools are suitable for Cycle Trains?

- Primary or intermediate schools.
- Where it's not too hilly a school located in a very hilly suburb is probably not the best bet for a Cycle Train.
- Where some children live at a reasonable distance from the school probably at least 500 metres (0.5 km) to 1 km away. If the majority of children live closer than this, they will be unlikely to use the Cycle Train.
- Where some of the roads around the school are cycle friendly; that is, the roads have low volumes of traffic, so that the Cycle Train can use it as the route to school. If one or more cycle lanes is/are available, even better!
- Where busy roads can be crossed at safe crossing points, rather than riding along them as part of the route.
- Where safe places to cross the roads are available.
- If cycle parking is (or could easily be made) available at the school. This could be bike racks outside that bikes can be locked to; or it could be an unused room in the school that can be locked up during the school day.

#### **Getting started**

As with all new initiatives, somebody has to take the lead in getting things started. In your school community, it could be a parent, teacher, principal, school board trustee or the local road safety coordinator. Whoever makes the first move, their key role is to enlist support. If you're a parent, talk to your school's principal and your local council's road safety coordinator about the idea. If you're a teacher, you'll need to enthuse and involve parents from the beginning to get their support before you can set up a successful Cycle Train. A partnership between the school, parents and the local council makes the set-up process easier.

#### Brook Street Cycle Train, Nelson



#### How to set up one or more Cycle Trains at your school

Here are some step-by-step instructions to starting up one or more Cycle Trains at your school:

1. **Survey**: The letter and survey form, found in this booklet, can be used by any school to collect the information needed from parents to start a network at your school. Simply fill in the date by which you want to have the questionnaire completed and returned to the school, and photocopy and distribute it and the letter to each family in the school. Send the letter and form home with the weekly school newsletter, as that is when most parents are expecting to receive something home from school. Put a notice in the newsletter explaining what is happening and reinforcing the 'due by' date. Place a follow-up notice in the next newsletter.

The survey asks people who don't want to join the Cycle Train scheme to give their reasons. Among other things, this could provide useful information on areas for safety improvements around the school neighbourhood, which you could then discuss with your local council.

- 2. Reflective vests or backpack covers: If you need to, now is a good time to seek some sponsorship for brightly coloured reflective vests or backpack covers to identify members of your Cycle Train network. Potential sources of support include your city or district council road safety coordinator, local businesses, or a community road safety trust. In Nelson, an organisation offered to sponsor these after a story about Cycle Trains was published in the local newspaper.
- 3. **Map routes**: Once the questionnaires have been returned to the school, they will need to be sorted into potential Cycle Train routes:
  - Sort the questionnaires, alphabetically, by street name.
  - Using a detailed map (such as a large-scale 'waterworks' map) of the area surrounding the school, mark the location of the children and adult volunteers in order to see where there is sufficient interest to establish a Cycle Train, and the route it might follow. These maps should show each section and section/house number, along with street names. Alternatively, if a GIS programme is available, this mapping could be done electronically.
  - Based on the location of the children and the number of volunteers available, determine where potential routes could be located and give each route a name, letter or number. Write this name/letter/number of the route on the individual questionnaires.
  - Take each route group of questionnaires and, using the *Cycle Train Route information* forms found in this booklet, write down the relevant information about the children (name, address, phone number, days available to use the Cycle Train) and the volunteer conductors (name, address, phone number and days available to conduct the Train). Make several photocopies of each route sheet for distribution at the meeting.
  - The final decision about the actual routing of the Cycle Train will depend on a number of factors, such as the location of busy roads, crossings, potential hazards, the children riding on the Train, and so on.

4. **Have a meeting:** Organise a meeting (again advertising in the school newsletter) for everyone who responded favourably to the Cycle Train concept. After welcoming them to the meeting, sort people into their 'route groups' so that the families who are going to be using it are the ones who decide the Cycle Train route, schedule, conductor roster and contact person for their route. Use copies of the handout *Cycle Train route information* supplied in this booklet for sorting out these details.

'Train stops' can be someone's house or driveway, or may be more formally identified with a sign. Remind people that the times and stops can be adjusted later if need be – nothing is cast in stone!

It is important to stress that Cycle Trains do not have to run every day. A small Train can start by running on Mondays and Wednesdays and can then grow, or at least be steady on those days.

At the close of the meeting, discuss the basic rules and responsibilities of the Cycle Train (give people the How the Cycle Train operates – guidelines for parents, children and conductors handout included in this booklet). The times for the workshop or meeting for conductors and the training session for children should also be announced, with a further notice put in the school newsletter. More information about the workshop and training session is found in the following paragraphs.

- 5. Have a conductor workshop or meeting It is necessary to ensure that adult volunteers are fully aware of their responsibilities as a Cycle Train conductor. The workshop will cover volunteer responsibilities, as well as concerns specific to Cycle Trains, such as road safety information (e.g. hand signals, what to do at crossings or in the event of a puncture or accident) and what to do if a child is late, hasn't got the right gear, has an unsafe bicycle, or misbehaves, etc.
- 6. Vetting volunteers Most volunteers will be parents at your school. Interested parents will be identified through your original survey. Some schools have also recruited volunteers from their community or through pre-employment schemes. The school should ensure volunteers have undergone a vetting procedure to determine whether they are suitable, particularly if a Cycle Train route has only one adult in attendance for each trip.

The police offer a service to check an individual's past history for any criminal convictions. School staff members are required to undergo such checks before their employment, as are any contractors, such as electricians and plumbers, who work on school premises.

- 7. Selecting the route(s) and conducting a hazard check A guide to safe route selection and a safe routes checklist is included in this handbook. The check may be done as part of the conductor workshop, or the conductors and interested parents may prefer to go over the route at another time, with the appropriate documents in hand and with the assistance of the local police or someone from the local council.
- 8. Training session for the children There is a three-stage testing and training process:
  - (i) A parent decides that their child is a competent cyclist and capable of learning to cycle on the road in a supervised Cycle Train.
  - (ii) A training session is set up at the school for all children wanting to ride on the Cycle Train. Children will be asked to demonstrate their riding skills in an off-road setting with an experienced adult cyclist, including using hand signals, the ability to look over the shoulder while riding in a straight line, and riding in a group. A safety check of bicycles is usually conducted. An outline of the children's training session and a bicycle checklist is found at the back of this booklet.

(iii) Having successfully completed the off-road demonstration, the children will participate in a 'training' ride on the actual route. Ideally this will occur after school, so the children experience traffic conditions similar to those that they will be riding in each day. The Cycle Train group should ride the entire route, identifying the 'Train stops', any places where they will be expected to dismount to cross the road, and any other potentially 'tricky' bits.

If there is any doubt about a child's ability, the conductor or coordinator can refuse permission to join the Train, or require further practice and re-testing before the child joins.

9. Launch the Cycle Train network: Send home a copy of the handouts How the Cycle Train operates – guidelines for parents, children and conductors, the Cycle Train Consent Form and Cycle Train route information, and a vest or backpack cover with each child who is on a Cycle Train route. It might be decided to organise a school-wide check-up of bicycles before the launch – perhaps through a local bike dealer. Organise the launch date, announce it in the school newsletter and get cycling!

It may be helpful to put up a 'Cycle Train stop zone' sign outside the school so the children have a designated meeting place after school. It also helps to let other parents know your school operates Cycle Train(s). It may encourage them to have their children join, or to start up a new one in their street!

You may want to involve some well-known people (such as sports figures, local councillors or MPs) or the media in your launch. Be sure to let them know what is happening!

- 10. **Have a follow-up meeting** When your Cycle Trains have been going for a month or so, it is worthwhile having a meeting with all the conductors, cyclists and their families to check that everything is 'okay' with them. This might be a good opportunity to remind everyone of the rules and to advertise in the school newsletter for new cyclists and conductors to join the Train.
- 11. **Keep up the interest** here are some things that may help keep interest high and let new families know the Cycle Train is available to them:
  - Advertise in the school newsletter, reminding people in the school community about the different routes, listing the contact names and phone numbers.
  - Hold a competition for the best decorated bike for Halloween or Easter (make sure the bike is still safe to ride!), or hold a theme colour day (e.g. Yay for Yellow! or Go for Green!)
  - Have a school competition to name each Cycle Train route.
  - Network with other schools that have Cycle Trains to plan a special Cycle Train day or event.
  - Acknowledge your volunteers on a regular basis, through the school newsletter or at other school events, or by holding a morning or afternoon tea, etc. without them, no Cycle Train could get off the ground!

#### <u>Resources</u>

The following pages provide you with ready-made tools to help you start your Cycle Train. Electronic versions of these tools are available from <a href="https://www.pinnacleresearch.co.nz">www.pinnacleresearch.co.nz</a>

#### <u>Contents</u>

- Letter to parents
- Cycle Train survey
- How the Cycle Train operates guidelines for parents, children and conductors
- Cycle Train route information
- Cycle Train: Consent form
- Cycle Train: Safe route checklist
- Cycle Train: Children's training session
- Text for school newsletters
- Handout / poster / flyer to promote Cycle Trains



**Brook Street Cycle Train, Nelson** 

#### SCHOOL LETTER HEADING

#### CYCLE TRAINS - a fun, safe and active way for children to cycle to school

Dear Parents

In an effort to ease traffic congestion around the school and to provide our children with good life-long cycling skills, we would like to establish several Cycle Train routes. In addition, the Cycle Train is good for the environment, and it also gives children regular exercise and the chance to meet new friends.

#### What is a Cycle Train?

Just like a Walking School Bus, a Cycle Train has at least one adult 'conductor' who cycles along an agreed route, collecting children waiting at designated 'Train stops' and cycling with them to school. After school, they cycle back along the same route. Before they can join a Cycle Train, a child will have to show they can confidently ride a bike. For this reason, we expect that children on the Cycle Train will generally be 8 years or older.

#### Are you interested?

We would like to know if setting up a Cycle Train network for our school has your support. We would be grateful if you would complete the questionnaire and return it to school by

A Cycle Train can be flexible, to suit the needs of the families using it - the 'Train' can go as little or as often as parents want to 'conduct' it and children can use it everyday or once a week, according to their family schedules. Children and adults on the Cycle Train will wear brightly coloured reflective vests or backpack covers so they are easily seen.

Routes will be established along quiet roads close to where our pupils live, depending on the level of interest shown by parents and their willingness to volunteer as 'conductors'.

#### When is the meeting?

A meeting will be held at the school in the next few weeks to discuss responses to the survey and our proposed Cycle Train scheme. You will be notified of the date via the school newsletter and your attendance and input would be very welcome.

Our Cycle Train Coordinator will contact you with more details if you can't make the meeting, so please express an interest in the Cycle Train through the survey.

Yours sincerely

If we have enough interest, we would like to have the Cycle Train(s) start later this term. The service will be free and a coordinator will organise parent volunteers to act as 'conductors'. There will be 3-6 children per adult on the Cycle Train, depending on the age of the children, the route, and so on.



You can answer most of the questions quickly by simply ticking a box or by writing down an answer.

#### Section 1: Identifying possible Cycle Train users

1. If a Cycle Train is organised from your street to our school, would any of your children use it some days? *Tick the appropriate response* 

<b>Yes</b> $\rightarrow$ Go to Question 3					
$No \rightarrow Go$ to Question 2					
<b>Maybe</b> $\rightarrow$ Go to Question 3					

2. For what particular reasons wouldn't your family use the Cycle Train?

**Thanks, that's all we need to know!** *End of survey for those answering 'No' to Q1. Please return to school by\_\_\_\_\_\_.* 

#### 3. Please tell us the name(s) and age(s) of your child/ren who know how to ride a bike and would use the Cycle Train:

	Child's first name	Child's surname	Age
Child 1			
Child 2			
Child 3			

#### 4. Please write your home address in the boxes below (this helps us to sort out possible 'Trains' and routes):

House/Flat number (e.g. 112; 12A)	Street name	Street type (Road, Place, Street, etc)	Suburb	

#### 5. In a typical week, when would your child/children use the Cycle Train? Please state which children would use it on what day.

	To school (write child/ren's name)	From school (write child/ren's name)
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		

#### Section 2: Cycle Train conductors

The success of this scheme depends on having adult volunteers to be 'conductors' of the Cycle Train.

Parents with younger children may find that using a 'trailgator' (see photo) or a bike-trailer (seating up to 2 children under the age of 3) allows them to volunteer to conduct the Cycle Train.

The trail-gator attaches the 2-wheeled bike of the younger child (usually aged 4 to about 7) to the adult's bike, permitting the child to pedal, but not steer.

If there is interest in the trail-gator and/or bike trailers, the local council may provide them on loan to parents at the school.



**6.** Would you or another adult be willing to volunteer to 'conduct' the Cycle Train on a rostered basis? *Tick the appropriate response* 

<b>YES, if I could use a 'trail-gator'</b> $\rightarrow$ Continue survey
<b>YES, if I could use a bike trailer</b> $\rightarrow$ Continue survey
<b>YES</b> (no trail-gator or trailer required) $\rightarrow$ Continue survey
$NO \rightarrow Go$ to Question 11
<b>MAYBE</b> $\rightarrow$ Continue survey

7. If yes, please write the name or names of the volunteer/s and contact phone numbers below:

	Name	Contact phone number
Adult 1		
Adult 2		
Adult 3		

8. Please indicate how often you or the other adult(s) would be willing to 'conduct' the Cycle Train. If more than one volunteer from this household, tick in separate columns.

I/they would be willing to conduct	Adult 1	Adult 2	Adult 3
One morning or afternoon per fortnight	0	0	0
One morning or afternoon per week	0	0	0
Two mornings or afternoons per week	0	0	0
Three mornings or afternoons per week	0	0	0
Four mornings or afternoons per week	0	0	0
Five mornings or afternoons per week	0	0	0
Don't know	0	0	0

9. Would you or these adults prefer to conduct the Cycle Train (tick the appropriate space	<b>hese adults prefer to conduct the Cycle Train</b> (tick the appropriate space)
--	---

	Adult 1	Adult 2	Adult 3
In the morning	0	0	0
In the afternoon	0	0	0
No preference	0	0	0

#### **10. On what days can you or these adults conduct the Cycle Train?** (*tick appropriate space*)

	Adult 1	Adult 2	Adult 3	
Monday	lay o o		0	
Tuesday	0	0	0	
Wednesday	0	0	0	
Thursday	0	0	0	
Friday	0	0	0	

#### Section 3: Travel to and from school

These questions help us find out how the Cycle Train could affect traffic on the roads around our school.

**11. How does your child/children usually travel to and from school each day?** Tick one option for each child's morning trip and one for each child's afternoon trip.

	Morning					After	noon	
	Child1	Child 2	Child 3	Child 4	Child 1	Child 2	Child 3	Child 4
Walk/scooter with an adult	0	0	0	0	0	0	0	0
Walk/scooter by themselves	0	0	0	0	0	0	0	0
Walk/scooter with siblings or friends	0	0	0	0	0	0	0	0
By bicycle	0	0	0	0	0	0	0	0
By bus/train	0	0	0	0	0	0	0	0
Driven in car pool	0	0	0	0	0	0	0	0
Driven by a parent/caregiver	0	0	0	0	0	0	0	0
Other – please give details below	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1

Thank you for taking the time to complete this questionnaire.

Please return it to your child's school by: \_





#### How the Cycle Train operates – guidelines for parents, children and conductors

## How the Cycle Train operates:

- In order to join the Cycle Train, a child must demonstrate their ability to confidently ride a two-wheeled bicycle (without training wheels) in a group. The Cycle Train Coordinator will organise a 'training session' for new Cycle Train users, which will go over bike-riding skills, using hand signals, stopping, crossing the road, etc. If the Coordinator thinks your child is not ready to go on the Cycle Train, they will discuss this with you and another training session may be organised.
- Generally speaking, children on the Cycle Train will be at least 8 years old, or older. Exceptions may be made for a 7-year-old who demonstrates good cycling skills, through the process described above.
- A child may only join the Cycle Train after attending a training session, and if the Cycle Train Coordinator has received a signed consent form from their parent/guardian.
- It is recommended that there be no more than 8 children on a Cycle Train for each run. If there are more children than this on the route, two 'Trains' can operate on the same route, perhaps leaving 5 or 10 minutes apart. To ensure balanced numbers, children and their parents will need to specify which Train they will cycle with.
- The Cycle Train will have one adult conductor for every 3-6 children. The ratio will vary to suit traffic conditions, the confidence of the conductors, and/or the age of the children involved. Generally, the ratio of 1 to 6 will only apply for children 10 years or older.
- Where there is only one adult conductor, they will cycle at the rear of the Train where they can see all of the children and what is happening ahead of the group. The oldest or most experienced child in the group will ride at the front of the Train (the 'leader').
- Where there are two adults, one will cycle at the front and one at the rear of the Train. The forward cyclist should ride a little to the right of the children to increase the group's visibility.
- Children will ride in a pre-set order every time they use the Cycle Train. This eliminates pushing and racing.

- Children must cycle in single file in between the 'leader' and 'conductor'.
- Cyclists will always ride together, but leave enough distance between each rider to be able to stop safely.
- Hand signals will be used before changing direction or stopping.
- All Cycle Train participants will be provided with brightly coloured reflective vests/backpack covers that clearly identify them as part of the Cycle Train. These must be worn at all times while on the Train.
- The Cycle Train will run rain or shine. (Note: this rule has to be agreed within each Train).
- If there is any problem en route and an adult or child is forced to stop, the other riders should pull over and wait where it is safe to do so. This might mean overtaking the riders who have stopped, and carrying on for a short distance. Children should not all stop suddenly without warning. Once they have stopped, they should dismount and wait on the pavement. This procedure will be covered in the children's training session.



#### MISBEHAVING CHILDREN

- The following protocols apply to dealing with misbehaving child(ren) on the Cycle Train:
  - The conductor(s) will speak to the child and request that the child behaves.
  - If the inappropriate behaviour continues, the incident will be reported to the school principal/deputy principal.
  - The school will record the incident and advise the child's parent.
  - If a child repeatedly causes trouble and/or is a risk to their own or others' safety, the child will be stood down from the Train for a stated period.
  - After that the child will be invited to rejoin the Train.



CATCHING / MISSING / LEAVING THE TRAIN

- Parents/guardians are responsible for their children's safety to and from the designated Cycle Train stops.
- If a child is not going to use the Cycle Train on any given morning or afternoon, the parent/guardian should contact that day's conductor <u>at least 15 minutes</u> before the Train is due to leave, to let them know.
- Unless the parent/guardian has given prior permission for the child(ren) to cycle to the stop or wait at the stop on their own, children must be supervised at Train stops until the Cycle Train arrives, and be met by a parent/guardian at the Train stop on the return journey.
- If a parent/guardian fails to meet their child(ren) at their designated Train stop on the homeward journey, then the child(ren) will ride with the Train to the end of the route. The conductor will then try to contact the child(ren)'s parent. If the parent cannot be contacted, the child will be taken back to school. The child will not be left unattended unless the parent/guardian has given prior permission for the child(ren) to cycle home alone from their designated Train stop.
- If a child misses the Cycle Train in the afternoon, they must go to the school office and inform a school staff member.
- Cycle Train participants will not be permitted to cycle independently 'in the vicinity' of the Train, and will instead be required to join the Train for their journey to or from school.
- Should a child wish to withdraw from the Cycle Train, the Cycle Train Coordinator must receive written consent from the child's parent or guardian.
- Any child who leaves the Train will always be welcome to rejoin. A new consent
- 🜠 form will be required from the parent or guardian.

#### SAFETY FIRST - THE CHILD:

- Your child's journey to school is still your responsibility, even though they will be cycling with the Cycle Train.
- Ensure your child understands and follows the behaviour guidelines.

- Ensure your child knows the three hand signals for cycling (stop, right and left turns).
- Ensure your child is suitably dressed for cycling:
  - Cycle helmet meeting approved NZ/Australian safety standard
  - Appropriate footwear
  - Shoelaces are tied and tucked into shoes if necessary
  - Reflective Cycle Train vest or backpack cover
  - Warm clothes in winter
  - Clothing should not be baggy or too loose fitting, such that it gets caught in bike chains, gears or brakes
  - A raincoat if it is wet (if the Cycle Train is to run in wet weather).
- Ensure that their lunch, books, etc. are stowed away safely in their backpack and that it is securely closed. It is important that their backpack is not too heavy! Alternatively, fit the bike with panniers or a rack that can safely hold their school bag/belongings.
- If a child has any medical conditions or allergies (to insect bites/stings; particular plants, etc.) that may affect them while on the Cycle Train, this should be noted on the consent form.
- If a child is injured while cycling on the Train, the Train will stop and the conductor(s) will assess whether or not the child can continue with the Train. If the child is unable to walk/cycle, an adult will remain with the child and the child's parent and the school will be contacted for further advice.
- The conductors cannot carry equipment/bags etc. for children on the Cycle
   Train.



#### SAFETY FIRST - THE CYCLE:

- Parents are responsible for ensuring that their child's cycle is in good condition and is serviced regularly. It is particularly important that the brakes are functioning well at all times.
- The cycle should be the correct size and adjusted to suit the rider. While sitting on the seat, the child should be able to put their toes on the ground to keep their balance when they stop.
- The tyres should be properly inflated and with sufficient tread.
- The cycle should be fitted with a bell, and reflectors (rear and pedal), and have a chain and lock for securing it while the child is at school.

- It could be useful to mark the cycle with the owner's phone number or other identification, in case it is stolen.
- Appropriate insurance against damage or theft is the responsibility of the parent(s).

## What children need to know:

There are six simple rules to keep children safe and happy on the Cycle Train.

Please take the time to go through these rules with your child before they cycle on

the Train.

- © Do as the conductor says.
- © Always ride in single file, in the correct order.
- © Always stay with the group.
- © Keep to the left-hand side of the road or path.
- © Get off your bike and cross the road with everyone else.
- © Always be on your best behaviour.

## What Cycle Train conductors need to know:

- All conductors must have a general knowledge of the road rules and be skilled at cycling.
- The Cycle Train Coordinator will be responsible for organising testing of the child/ren's skills and abilities if they wish to join the Cycle Train (see the relevant points under *How the Cycle Train operates*).
- Parents are welcome to cycle with the Train at any time. Parents who are able to take a rostered place as a 'conductor' of the Train are especially welcome!
- Conductors must arrange for a stand-in if they are unable to attend their normal 'shift', or let the families know the Train will not run that day.
- All conductors should carry a mobile phone and contact phone lists with them when they are conducting a Train. If there is an 'incident', help can be sought via the cell phone, passers-by or from a nearby house or shop. An alternative is to have the entire Cycle Train dismount and walk the bikes to school or home.
- Conductors are responsible for ensuring the children stay together, cross roads safely, and stick to the designated route.
- Conductors should only deviate from the route if it is essential, e.g. if the road is blocked by an accident or road works and a safe alternative is available. Otherwise, it may be necessary for all cyclists to dismount and continue walking along the pavement until it is safe to ride again
- If you see a hazard along the route (cracked pavement, overhanging branches, threatening dog, etc.) call the city council on [number] and let them know that this is a school Cycle Train issue. In the event of emergencies, dial 111.
- Any accidents or near misses should be passed on to the Cycle Train Coordinator.

For any further information contact:

[Cycle Train Coordinator contact details]

#### Cycle Train route information



Route:

#### DAYS OF OPERATION / CONDUCTOR ROSTER:

	Monday	Tuesday	Wednesday	Thursday	Friday
Morning					
After School					

Contact person \_\_\_\_

phone # \_

#### CYCLE TRAIN SCHEDULE AND ROUTING:

'Train Stops'	Morning pick-up time	Afternoon drop-off time
		$\langle \rangle \rangle$

#### CYCLE TRAIN RULES:

- Please contact the conductor at least 15 minutes before the start of the Cycle Train if your child is not going to use the Train on their usual day.
- The Train leaves on time it won't wait for late children!
- Children must listen to the conductor when cycling with the Train misbehaviour may mean that a child cannot use the Train.
- Children & conductors should wear their vests/backpack covers when cycling with the Train this identifies them as part of the Cycle Train & increases their visibility.

#### Be safe! Have FUN!!



Cycle	Train	route:	
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#### CHILDREN'S TRAIN USE

			Room		N	Nornir	ng			A	terno	on	
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CONDUCTORS'	AVAILABILITY	$\sim$									1		

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									•		•	



I want my child/children to cycle with the _		Cycle Train.
PLEASE PRINT CLEARLY		
Child's name:	Class:	
Child's name:	Class:	
Child's name:		
Address:		
Telephone: (day)		
(Evening)		
Emergency contact number/alternative:		
My child/ren will cycle with the Cycle Train	at these times:	

	Monday	Tuesday	Wednesday	Thursday	Friday
Morning					
Afternoon					

He/She/They will join and leave at the Train stop ... (please tick one of the following)

X	At their home address (as given above)
	At another given address (e.g. grandparents'/caregivers'
	address). Please state this
	At the stop at
	Other - please state where

Please note any medical conditions or allergies (e.g. insect bites/stings, particular plants) that may affect your child whilst on the Train.

#### Parent Agreement

I have explained to my child/ren the six Cycle Train rules:

- © Do as the conductor says.
- © Always ride in single file.
- © Always stay with the group.
- © Keep to the left-hand side of the road or path.
- © Get off your bike and cross the road with everyone else.
- © Always be on your best behaviour.

I agree to make sure that:

- My child/ren's bike is in good working order and safe to ride.
- My child/ren is dressed suitably (including shoes) for cycling.
- My child/ren's book and lunch are stowed away safely for cycling to school.
- My child/ren arrives on time at his/her Cycle Train stop in the morning.
- My child/ren is met in the afternoon at his/her Cycle Train stop, or they are capable of cycling home on their own.
- I will phone the Train conductor if my child/ren is not going to be on the Train, at least 15 minutes before its start time.

I have read and understand the handout *How the Cycle Train operates - guidelines* for parents and conductors.

I know that my child/ren's journey to school is still my responsibility, even though they will be cycling with a Cycle Train.

If you have any questions or would like any further information, please contact: [Cycle Train Coordinator's name] [Contact details]



Please return this consent form to your child/ren's school ASAP.



#### Safe Route selection

- The Cycle Train Coordinator, cycle trainer, community constable, and parents are people who could be involved in the setting of a Cycle Train route. It is really helpful to have at least one experienced cyclist giving a hand.
- Routes should be assessed as suitable for the age and ability of the children.
- Use bike lanes/paths were possible. Alternatively, choose quiet side roads, avoiding 'main' roads with higher volumes of traffic. Remember that the safest route is not necessarily the shortest.
- Cycling on footpaths is only permitted where it is a shared cycle/walking path otherwise, routes must be located on the roadway.
- Identify safe crossing places.
- Identify intersections where cyclists might become separated, such as those controlled by traffic lights, when joining major roads, or when turning right, and work out how they should be handled by those on the Cycle Train. Some possibilities include:
  - The conductor and other riders must pull over on a suitable stretch of road and wait until the rest of the group catches up.
  - The group will stop safely before certain junctions, dismount and walk across together before continuing to ride.
- Decide where the 'Train stops' might be safely located (e.g. visible, out of the way of pedestrian and vehicle traffic, etc.)
- At the school: Develop some rules for how each Cycle Train will arrive and depart from school. What entrance will a Train use (the main school gate is usually far too busy)? Will the children need to dismount their bikes and walk them into the school grounds? Where will they dismount? Where will the children meet in the afternoon for the ride home?
- Once a potential route is identified, conduct a full route hazard check, using the supplied checklist. Ask your local council to repair any serious hazards before the Cycle Train is launched.
- Enquire with the council about the possibility of sign-posting each route with 'Cycle Train route' signs, to create a higher community profile
- Once the route is finalised, conductors should only deviate from this route if it is essential, e.g. if the road is blocked by an accident or road works and a safe alternative is available. Otherwise, it may be necessary for all cyclists to dismount and continue walking along the pavement until it is safe to ride again





#### Cycle Train: Safe route checklist

School:	Route	::
Date:	Time:	

A map of the area around the school should be provided for the purposes of completing this safety check, so that any areas of concern can be noted on the map itself.

It is good practice to have at least two adults cycle the route together to ensure all possible concerns are captured. Recall that children will be cycling the route later - they are smaller, with smaller bikes, so something that is not a concern for an adult might still be a concern for a child, and will need to be recorded.

1. Do you have room to bike?

- No problems
- 3 Some problems (please indicate below)
- No bike lane or bike path
- **∋** Road is narrow cannot accommodate bikes and cars
- Э Street uneven, cracked, broken
- ∋ Debris (broken glass, rubbish, dead vegetation) on the road where cyclists would be riding
- Parked vehicles take up cycling space/lane
- → Too many driveways to pass by
- Our State of the state of th
- $\ni$  Too much traffic
- $\ni$  Something else? \_

Location of problems (please mark these on the map provided) and other comments:

2. Was it easy to cross? Would a child and bike be visible to oncoming traffic?

- ∋ No problems
- $\Im$  Some problems (please indicate below)
- <sup>3</sup> Parked cars or utility poles block view of traffic
- Trees or plants block view of traffic
- Need pedestrian crossing signal

- Marked pedestrian crosswalks required
- $\rightarrow$  Need traffic signals (for cars)
- $\Im$  There isn't sufficient time to cross before the walk signal changes
- $_{\Im}$  The road is wide and there is no 'refuge' in the middle of the crossing
- 3 Something else? \_\_\_\_\_

Location of problems (please mark these on the map provided) and other comments:

3. Did the drivers behave well?

Before answering this question, observe the traffic for 5-10 minutes at any 'busy' part(s) of the route.

- No problems
- ∋ Some problems (please indicate below)
- Gars don't stop at stop signs or don't give way to cyclists
- $\Im$  Cars seem to be going too fast (at or above the speed limit)
- For a cars don't yield to people crossing the street
- Gars backed out of driveways without looking
- $\Im$  Cars turned into people crossing the street
- Something else?

Location of problems (please mark these on the map provided) and other comments:

4. Are there any places to stop the Cycle Train for an emergency, flat tyre, or other event? This could be road shoulder, footpath, park, etc.

Location of potential stopping places (please mark these on the map provided) and any other comments:

Please return to the Cycle Train Coordinator or the School Office

#### Cycle Train: Children's training session

It is probably easiest to have the children's training session during school hours, as this ensures full attendance. The training session should include actual training as well as a bicycle 'warrant of fitness' check.

Where possible, conductors should also attend the training, so they can meet the children on their Cycle Train and ride with them.

As the children should already be reasonably able cyclists, the training session should take less than two hours to complete.

**If there is** <u>any</u> doubt about a child's ability, do not give permission for the child to join the Cycle Train. Discuss your concerns with their parent(s) and, if appropriate, schedule another training session and/or a re-test.

An outline of the material to cover in the training session and the bicycle safety checklist are provided in the following pages.



#### Content of children's training session

1.	Introduction	Explain to the children what the training session is about, emphasising that being able to ride a bike does not mean they know everything or are a competent rider. Riding in a group is probably new to most of them, and will require learning new skills and a little practice.
2.	Bike and helmet	<ul> <li>Checklist provided</li> </ul>
	check	<ul> <li>Discuss with the children what clothing and footwear is/is not suitable for cycling. This can be done while each bike is being checked; perhaps talking about what the child is actually wearing at the time.</li> </ul>
3.	Bike control	• Starting on the bike (pedal lined up with tubing, so body weight pushes)
		<ul> <li>Position of feet on the pedals</li> </ul>
		<ul> <li>Stopping/Using the brakes - Practise stopping</li> </ul>
		<ul> <li>at whistle blow</li> </ul>
		<ul> <li>on the line</li> </ul>
		<ul> <li>with hand signals</li> </ul>
		<ul> <li>Use of gears (if necessary)</li> </ul>
		<ul> <li>Riding 50 metres in a straight line - alone</li> </ul>
		<ul> <li>Slow riding in a 3-metre wide square/circle</li> </ul>
	Ó	<ul> <li>Single file circle riding - emphasis on maintaining spacing; watching rider in front of child; listening to conductor</li> </ul>
4.	Road rules	Discuss and practise on-road rules and skills:
		o Signalling:
		<ul> <li>Practise while (i) standing in a line; (ii) walking; and (iii) on bikes</li> </ul>
		<ul> <li>Remind children to put hand back on bike before turning/stopping</li> </ul>
		o Checking behind
		<ul> <li>What to do at intersections/stop signs/give ways/roundabouts</li> </ul>
		<ul> <li>Passing parked vehicles</li> </ul>
		<ul> <li>Obeying other signs</li> </ul>
		<ul> <li>One-way roads (if required)</li> </ul>
5.	On-road cycling	<ul> <li>Riding in position in a group - children will ride on Train in a set order. Have younger cyclists 'sandwiched' between two older ones.</li> </ul>
		<ul> <li>Cycle entire route - preferably in both directions (e.g. leave from school and cycle to the end, then cycle back to school)</li> </ul>
		<ul> <li>Starting off as a group</li> </ul>
		<ul> <li>Stopping as a group</li> </ul>
		• What to do at intersections - roundabouts, give ways, stop signs, etc.
		<ul> <li>What to do at Train stops</li> </ul>
		<ul> <li>What to do in an 'emergency' (if someone is knocked over or has a flat tyre, etc.)</li> </ul>
		<ul> <li>What to do about any other 'tricky' bits</li> </ul>



## Bicycle checklist Name of cyclist: \_\_\_\_\_

Frame       Adjustment/replacement         Bike is the proper size to fit rider       Adjustment/replacement         Fork in good condition       Replacement         Frame in good condition       Replacement         Handlebars are tight       Tighten centre         Handlebar sitight       Tighten centre         Handlebar grips are secure       Need securing/replacement         Steering system is tight       Adjustment/replacement         Handlebar grips are secure       Adjustment/replacement         Seat is in good condition       Replacement         Seat is correct height (when seated, toes should just touch the ground)       Adjustment         Wheels       No spokes are missing, wheel is true       Replacement         Tyres have good tread       Replacement       Adjustment         Valve stem is straight       Adjustment: Front cable/rear cable/right lever/left lever         Brakes       Cables are tight, not frayed or broken       Adjustment: Front cable/rear cable/right lever/left lever         Brake pads are in good condition and adjusted       Replacement       Cables/right lever/left lever         Pedals, dranks, chain and gears       Pedals, dranks, chain and gears       Pedals, dranks, chain and gears         Pedals ok       Replacement       Clean and grease       Chain tension is correct       Adjustment:	Item	In good working order (√/X)	Requires:
Fork in good condition Replacement Frame in good condition Replacement Handlebars are tight Tighten centre Handle stem is tight Adjustment/replacement Handlebar grips are secure Need securing/replacement Seat is in good condition Replacement Seat is orrect height (when seated, toes should just touch the ground) Wheels No spokes are missing, wheel is true Replacement Tyres have good fread Replacement Valve stem is straight Adjustment/ Brakes Cables are tight, not frayed or broken Brake gods are in good condition and adjusted Pedals, cranks, chain and gears Pedals ok Replacement Crank turns freely Chain is clean and free of rust Chain is clear ok Reflector rear ok Reflector rear ok Replacement Helmet meets AUS/NZ standard Helmet fits properly Adjustment/replacement Helmet fits properly Adjustment/replacement Replacem	Frame		
Frame in good condition       Replacement         Handlebars are tight       Tighten centre         Handle stem is tight       Tighten centre         Steering system is tight       Adjustment/replacement         Handlebar grips are secure       Need securing/replacement         Seat is in good condition       Replacement         Seat is correct height (when seated, toes should just touch the ground)       Adjustment/replacement         Wheels       Replacement         No spokes are missing, wheel is true       Replacement         Tyres have good tread       Replacement         Valve stem is straight       Adjustment         Brakes       Cables are tight, not frayed or broken         Cables are in good condition and adjusted       Replacement         Pedals ok       Replacement         Crank turns fneely       Adjustment/replacement         Chain tension is correct       Adjustment         Chain tension is correct       Adjustment         Gears shift smoothly       Adjustment         Reflector front ok       Need         Reflector front ok       Need         Hellett fits properly       Adjustment/replacement	Bike is the proper size to fit rider		Adjustment/replacement
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Accessories are secure (e.g. lock, carrier) Adjustment	Helmet fits properly		Adjustment/replacement
	Accessories are secure (e.g. lock, carrier)		Adjustment



#### Text for school newsletter

#### When the letter and survey goes to parents:

Cycling to school is about to get way cool ...

You'll notice a letter about Cycle Trains and a survey attached to this newsletter. We want to get Cycle Trains set up at our school to give you a safe alternative way to get your children to and from school, and to help reduce traffic congestion around the school gate.

The letter tells you about Cycle Trains and how they operate. The survey will tell us whether you, and other families in your area, are interested in participating. Please return it to school by [date].

Let's get involved in making our children's trips to school safer, and do our bit for the environment.

#### When you are ready to hold your parents' meeting:

Cycle Trains are coming!!

Thanks to everyone who returned the surveys indicating their interest in Cycle Trains. We're now ready to show you the proposed routes for Cycle Trains and who will be cycling on them.

A meeting to discuss the routes and volunteer rosters will be held at [place] on [date]. With the response we've had, we think we can make a real impact on traffic congestion around the school gate and even make a difference to the environment! The increased cycling will also improve the health and road safety skills of the children (and parents) involved.

#### News update every term about the Cycle Train:

[School name] runs a Cycle Train - a safe and fun way for children to cycle to and from school with other children, supervised by a rostered group of parents. The Cycle Train helps get rid of the traffic congestion around the school gate, making it much safer for our students - and it's better for the environment too!

We would love to hear from you if you and your child would be interested in joining our Cycle Train.

We currently have [number] Cycle Train routes:

[Cycle Train Group name]

[Enter route details here - .e.g. from the intersection of Clog and Scooby St, along Scooby St to the school.]

This Cycle Train operates to and from school Monday-Friday [adjust accordingly].

For more information, contact the coordinator [name and contact details].

[Cycle Train Group name]

[Enter route details here.]

This Cycle Train operates to and from school Monday-Friday.

For more information, contact the coordinator [name and contact details].

[Cycle Train Group name]

[Enter route details here.]

This Cycle Train operates to and from school Monday-Friday.

For more information, contact the coordinator [name and contact details].

If you would like some more information, please enquire at the school office, or you could check out the Cycle Train information on [school website] or the Pinnacle Research & Policy Ltd website (www.pinnacleresearch.co.nz).



# Cycle

## A fun, safe way to travel to and from school



Background to Cycle Trains Since 2002, Cycle Trains have become increasingly common internationally: several schools in the UK now have school-based Cycle Trains, and Hertfordshire Council has published some very basic guidelines for their development. School-based Cycle Trains are most widespread in Belgium: during the school year 2004–2005 a total of 317 trains (involving 2390 children) were registered, with an average of 4 Trains per school.

#### What is a Cycle Train?

A Cycle Train is an alternative method for children to travel to and from school. Similar in approach to the 'Walking School Bus', adult volunteer 'conductors' cycle along a set route to school, collecting children from one or more designated 'Train stops' along the way.



### Cycle Trains and school travel plans

The ability to develop and implement Cycle Trains is a useful tool within the school travel plan 'toolkit'. Cycle Trains complement Walking School Buses, because they appeal to a slightly older age group – Walking School Buses are most popular with younger children (aged 5–8), while Cycle Trains appear to be more popular with children aged 8–10.





#### How to set up Cycle Trains: Help for schools and communities

As well as outlining the process for setting up Cycle Trains, the guidelines provide the following resources:

- Letter to parents
- Cycle Train survey
- Safety and operating rules
- Cycle Train route information form
- Cycle Train consent form
- Cycle Train safe route checklist
- Cycle Train training session for children
- Text for school newsletters

The guidelines are available from: www.pinnacleresearch.co.nz



#### The Nelson trial

This was carried out by Nelson City Council's Safe Journey to Schools Coordinator – Krista Hobday. Using the process we developed, six Cycle Trains were launched in Nelson, New Zealand in September 2006. A seventh one was launched in late November 2006. Most of these Cycle Trains proved to be selfsustaining, even after the 2-month summer break. In fact, the programme expanded – another school engaged the process and set up a Cycle Train, and two further Cycle Trains were established in the trial schools.



#### **Trail-gators**

The coordinator and conductors recommended making 'trail-gators' and bike trailers available for parents to use for younger children, to increase the pool of potential Cycle Train conductors and participants.

