

Wellington Regional Council



**Report on Land Use and
Urban Design Guidelines for
Support of Cycling in the
Wellington Region**

Wellington Regional Council

**Report on Land Use and
Urban Design Guidelines for
Support of Cycling in the
Wellington Region**

Second Draft: December 1997

**KINGSTON
MORRISON**
Architects Engineers Planners Scientists

<i>Auckland</i>	Tel	+ 64-9 520 6069	Fax	+64-9 520 4695
<i>Wellington</i>	Tel	+ 64-4 473 4265	Fax	+64-4 473 3369
<i>Christchurch</i>	Tel	+64-3 379 0135	Fax	+64-3 377 2209
<i>Invercargill</i>	Tel	+64-3 218 7102	Fax	+64-3 214 4843
<i>Manila</i>	Tel	+63-2 893 6001	Fax	+63-2 890 6090
<i>Jakarta</i>	Tel	+62-21 522 2975	Fax	+62-21 525 0258
<i>Suva</i>	Tel	+679 315 770	Fax	+679 307 002

Contents

1.	Introduction	1
2.	Background	2
3.	Studies and Process	3
4.	Literature Review	4
5.	Document Review	8
5.1	Land Transport Safety Authority	8
5.2	Wellington Regional Council	9
5.2.1	<i>Regional Policy Statement, May 1995</i>	9
5.2.2	<i>Wellington Regional Land Transport Strategy 1996-2001</i>	10
5.3	Local Authorities	11
5.3.1	Carterton District Council	11
5.3.2	Kapiti Coast District Council	12
5.3.3	Lower Hutt City Council	14
5.3.4	Porirua City Council	15
5.3.5	Upper Hutt City Council	16
5.3.6	Wellington City Council	17
5.3.7	Summary of Supportiveness of District Plans	19
5.3.8	Assessment of Density Determinants	21
5.4	Other Documents Referred To	21
6.	Consultations	22
6.1	Introductory Workshop	22
6.2	Territorial Authorities	22
6.3	Transit New Zealand	22
6.4	Safety Organisations	22
6.5	Cyclists	22
7.	The Guidelines	23
7.1	Purpose	23
7.2	Format	23

Appendices

Appendix 1	Bibliography
Appendix 2	Local Authority Checklist
Appendix 3	A Cyclist's Review of Cycle Facilities in the Greater Wellington Area
Appendix 4	Meeting details
Appendix 5	Sample Guidelines

1. Introduction

This report is made by Kingston Morrison Limited, Urban Planners, Transportation Planners, Traffic Engineers and Environmental Specialists of Auckland and Wellington, for the Wellington Regional Council (WRC) as commissioned by Anthony Brennand, Manager, Transport Planning and Policy, WRC on 7 May 1997. The purpose of the report is to facilitate the development of Land Use and Urban Planning Guidelines to Promote and Support Cycling throughout the Wellington Region (the Guidelines). The report introduces a set of Draft Guidelines for discussion and further input by some of the key stakeholders in such planning. Once the Guidelines have been finalised and accepted by the WRC it is intended that they be incorporated into the Wellington Regional Land Transport Strategy (WRLTS) which is currently under review.

2. Background

Under the Land Transport Act, the WRC are required to review the WRLTS every two years and to make provision for alternative modes of transport, including cycling. The WRLTS (1996-2001) contains a strategy (Strategy C) to

“Minimise travel demand by well planned land use development”

It draws attention to two kinds of land use policies to aid transport efficiency: Namely:

- *“Policies that minimise the demand for travel...”* and
- *“Policies that promote transport by means other than private car...”*

(Ref. WRLTS [1996-2001], Strategy C, p22)

Although some examples of policy measures are suggested, no explicit land use planning policies or methods were finalised at that stage.

The WRLTS (1996-2001) also contains a strategy (Strategy F) to:

“Minimise the impact of transport on the environment”

To this end, it introduced a policy to

“Make cycling and walking more attractive”

(Ref. WRLTS [1996-2001], Strategy F, Policy 1, p28)

To pursue these policy directions further, a one-day seminar was promoted by the WRC on 7 May, 1997, when representatives of the local authorities from within the Wellington region met in Wellington City to consider alternative modes of transport to private cars and to discuss issues which could enhance more activity in alternative modes such as cycling and pedestrian movement. As a follow up to this seminar and to strengthen the WRLTS in these areas, planning guidelines were requested to support, inter alia, cycling throughout the Wellington Region. This report summarises the work that has been carried out to formulate such Planning Guidelines in Support of Cycling in the Wellington Region.

3. Studies and Process

The introductory seminar provided a valuable starting point for the study with useful feedback to build upon. The next step was a worldwide literature search, making use of the Internet to source material. Then an examination of the Statutory framework was carried out, in particular, each of the emerging District Plans was reviewed, to ascertain the degree to which strategies, policies and rules were supportive of cycling. This was followed up by visits to the five largest local authorities, to obtain an up to date picture. Discussion focused on how their District Plan was performing, attitudes to containing and intensifying development, the existence of supportive supplementary reports or guidance and specific provision for cyclists within the district. Meetings were also held with roading and safety organisations, as well as cycling groups.

During the course of this work the guidelines were evolving and have now been completed in draft form, as a separate document. It was opportune that a symposium entitled Planning for and Promoting Cycling was held at the University of Waikato on 15 October 1997, bringing together a wide range of interest groups. Attendance at this seminar enabled an appreciation of the current position of cycling in New Zealand's urban areas and reinforced the conviction that such guidelines are needed to bring about a revival of cycling in the Wellington Region.

4. Literature Review

The literature search revealed a limited amount of material specifically related to cycling. This material comprised manuals dealing mainly with engineering aspects and articles and papers discussing cycling policies, needs and requirements. A large volume of work has been published in relation to the containment and intensification of development, commonly referred to as the 'Compact City Movement'. A cursory inspection of some of these works was made in order to understand the principles of the movement and ascertain their relevance to the support of cycling. More directly useful for this study have been the documents which focus specifically on reducing the need to travel through land use planning and the encouragement of green modes of transport which have arisen from the need to bring about sustainable development.

The overriding message from the literature is that if the nature of society is not to be dictated by the requirements of private mechanised travel then a fundamental change in attitude towards cycling as well as walking and public transport is needed. Putting meaning into this ideal is no easy task, but it needs to penetrate the thinking about the strategic location of activities, just as much as how to design a junction to accommodate cyclists.

The most relevant documents are listed in Appendix One with a brief summary of their content. Although most of the works are from overseas the intention has been to draw from them ideas and methods which are applicable to New Zealand. Hence, the bibliography includes works from Australia, where there are similarities to New Zealand both in urban form and roading practices and standards, Britain and Europe, where cyclists must be accommodated in heavily trafficked urban areas, with the Netherlands being in the forefront of cycling initiatives and the United States where development has been very much car oriented and so major effort is needed to reverse the trend.

The following works are considered particularly pertinent:-

1. Austroads:

Guide to traffic engineering practice - Part 14, Cyclists, 1993

A manual to provide guidance on engineering aspects of providing for bicycle riders. The first two chapters look at bicycle travel and considerations in planning for it. The main goal of bicycle planning is identified as encouraging cycling as a desirable alternative form of transport. Chapter Two -Planning for Cyclists is of particular relevance, giving useful guidance on preparing a bicycle plan. The remaining six chapters give design details for cycling provision.

In the absence of a similar New Zealand publication it is recommended that this manual be adopted for use by Local Authorities.

2. The Department of Transport and the Institution of Highways & Transportation (U.K.),
Cycle-friendly Infrastructure, Guidelines for Planning and Design, 1996

This book describes best practice in providing for cyclists. The Guidelines detail highway matters as they relate to cyclists, not just cycling facilities. The emphasis is on engineering matters, i.e. what to do and how to do it. The guidelines are aimed at professionals working within a policy context which promotes cycling. A Local Authority Action Plan provides a useful checklist, see Appendix Two

3. Environment, Department of & Transport, Department of ,U.K.
Planning Policy Guidance (PPG 13), March 1994

and

PPG 13 A Guide to Better Practice - Reducing the need to travel through land use and transport planning. H.M.S.O undated c.1995

These two documents set out the British Government's policy on transport, with the guide elaborating upon the advice found in the guidance note. It is incumbent upon Authorities to take the advice into account when preparing development plans. An over-riding aim is to reduce the need to travel. To this end the guidance states that existing urban centres should be revitalised and rural communities strengthened. Local Authorities should consider carefully the impacts on travel demand of all new development before consent is given. The maximum amount of housing should be allocated to existing larger urban areas or failing this in locations which can be well served by public transport. Incremental expansion of houses in villages and small towns where travel needs are unlikely to be well served by public transport, should be avoided, as should sporadic housing in the open countryside. The guidance identifies locational policies for different uses which should be adopted in order to reduce the need to travel and emphasises the need to provide a range of facilities at the local level.

Although there is no national policy framework in New Zealand which requires a reduction in the need to travel, many of the principles contained in these two documents could be adopted within the Wellington Region.

4. Ed. Tolley, Rodney

The Greening of Urban Transport - Planning for walking & cycling in Western Cities, Bellhaven Press 1990

A collection of essays on the theme of planning for walking and cycling. Its three sections examine the principles, strategies and practice of 'green' transport planning. Collectively the essays argue for pedestrian oriented towns. Examples of policies and practices in Britain, Germany, Holland and America are included. Much of the good practice is found in Germany which is making a nationwide push to reduce motorised traffic and improve public transport. An analysis of how American settlements have become so alien to the pedestrian can be taken as a warning to those places which are in earlier stages of the same scenario.

Although measures such as devoting more space to the pedestrian whilst reducing the amount available to the car, traffic management and pedestrian and cycle networks are all seen as steps in the right direction, the final message of the book is that the 'red' modes (i.e cars) have to be checked to allow the 'green' modes to function.

5. Newman, P; Kenworthy, J and Lyons, T

Transport Energy Conservation Policies for Australian Cities. 1990

A report summarising ten years of work on transport energy conservation policies for Australian cities. Based on extensive research and case studies, Newman, Kenworthy and Lyons identify a negative correlation between petrol consumption and density, that is, the greater the density the less the amount of petrol consumed and by inference the greater the use of non-petrol consuming transport modes. This relationship is illustrated graphically (reproduced below as Figure 1). The authors suggest that cities such as Sydney are at the stage where a choice must be made whether to follow the low density, increased car dependence of many American cities or the more compact European example.

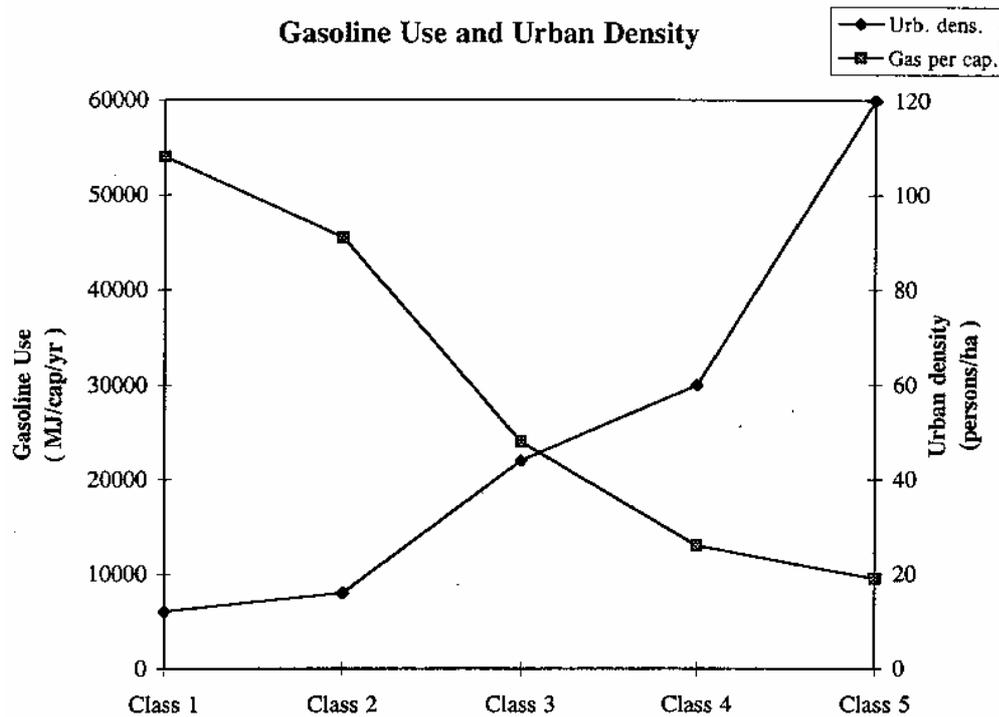


Figure 1: Source: Newman, Kenworthy and Lyons (1990)

City Examples

- Class 1 Pheonix, Denver, Perth, Adelaide, Brisbane
- Class 2 Melbourne, San Francisco, Boston, Chicago, Sydney
- Class 3 Toronto, New York, Hamburg, Brussels
- Class 4 Frankfurt, Vienna, London, Berlin
- Class 5 Munich, Singapore, Hong Kong, Paris

5. Document Review

The policy framework within which the proposed cycling guidelines will sit was examined in order to establish the context, ensure consistency where appropriate and to assess the degree to which emerging District Plans would be supportive of the objectives of the study.

5.1 Land Transport Safety Authority

National Road Safety Plan 1995,

This plan sets out a vision for the year 2000 and beyond, aiming to have a level of safety on New Zealand roads equivalent to the safest countries in the world. One of the main themes of the document is 'safer people'. Local and Regional Governments are charged with the task of ensuring :-

“that planning of local facilities and residential areas effectively takes account of the road safety needs of the community”,

whilst Transport and Land Use Planners must :-

“Adopt effective and safe traffic management measures in planning transport and land use developments”

and

“Pay particular attention in the planning task to the safety requirements of people with disabilities, older people, children, pedestrians and bicycle riders”

In a workbook which accompanies the safety plan, the Land Transport Safety Authority (LTSA) has identified strategies for achieving their vision. Those of relevance to this study are as follows:-

- Identify safe cycle and pedestrian routes to school
- Implement road and walkway designs which separate pedestrians from motor vehicles
- Improve pedestrian crossing facilities
- Implement traffic calming measures
- Ensure that footpath and street facility design accommodates the needs of the blind and disabled

- Encourage the integration of road safety policies into land use and transport planning by appropriate organisations
- Local authorities take into account road safety when considering applications for resource consent
- Encourage strategies that minimise the amount of travel necessary to move people and goods
- Protect the safe character of local streets

5.2 Wellington Regional Council

5.2.1 *Regional Policy Statement, May 1995*

This statement identifies the significant resource management issues for the Wellington region and sets out the policy framework for their management. Territorial Authorities within the region must operate within this strategic framework and further develop the means of promoting sustainable management of resources.

Chapter 14: The Built Environment and Transportation, discusses the sustainable management of the built environment, including transportation systems, of the policies which ensue from this discussion, the following are central to the formulation of these guidelines:-

Policy 2

To use natural and physical resources efficiently in the development of urban areas and in use of the built environment by:

1) Encouraging forms of urban development that reflect efficient use of resources;

Policy 3

To promote the development of transportation systems in the Region that:

- 1). Meet community needs for accessibility*
- 2). Use modes of transport that are powered by renewable energy fuels*
- 3). Help moderate demand for energy and use energy efficiently*
- 4). Discourage dispersed development and*
- 5). Avoid or reduce adverse effects on human health, public amenity and water,
soil, air and ecosystems*

The Regional Land Transport Strategy (see below) is seen as the means of pursuing and expanding upon this policy.

5.2.2 *Wellington Regional Land Transport Strategy 1996-2001*

Under Section 23(3) of the Transit New Zealand Act, Regional Councils are required to prepare a transport strategy. The Wellington Regional Land Transport Strategy (WRLTS) gives overall policy guidance for land transport in the Wellington region. It is the duty of the Territorial Authorities in the region to have regard to the strategy when preparing District Plans.

The strategy document identifies six strategies as follows:

- a) Enhance and expand urban public passenger transport facilities and services
- b) Maintain and improve the strategic transport network
- c) Minimise travel demand by well planned land use development
- d) Improve and maintain the safe operation of the transport network
- e) Restrain the growth of commuter road traffic
- f) Minimise the impact of transport on the environment

Each of these strategies has a number of supporting policies and it is the purpose of this study to provide guidelines for the implementation of

Strategy c), Policy 1

Promote land development that minimises total demand for travel

and

Strategy f), Policy 1

Make cycling and walking more attractive

5.3 Local Authorities

The District Plans for six of the eight Territorial Authorities within the Wellington Region have been reviewed in order to determine the degree to which they encourage public transport, cycling and pedestrian supportive land use and urban design. In particular, their support for containment of urban development, increasing density, encouraging mixed use, sustaining and improving public transport services and providing pedestrian and cycling facilities has been assessed.

5.3.1 Carterton District Council

Proposed Carterton District Plan February 1996

The District Plan identifies five zones, by far the largest being Rural Environment. The Council strategy for the small area centred on the town of Carterton classified as Urban Environment is that :-

“Generally residential development will be consolidated, while maintaining residential amenity. A greater mix of compatible activities will be supported.....” (1.4.2)

Mixed use is supported in the Urban Commercial zone through Policy 5.4.1, which states that

“the commercial area shall be maintained and enhanced as a mixed use higher density area”

Various policies and methods support pedestrian and bicycle use:-

Policy 4.3.6

“The roading network shall be attractive, efficient and safe for vehicles (including bicycles) and pedestrian travel. Pedestrian and or bicycle access ways shall be established where these will improve accessibility”.

Sub-division provision 9.6.1.18 encourages developers to make

“Provision for pedestrians and non-motorised road users”

and provision is made for public access to and along water margins (Policy 7.3.2)

The applicability of the study to this rural, sparsely populated district is limited, however.

5.3.2 Kapiti Coast District Council

Kapiti Coast Proposed District Plan 2 September 1995

The district is divided into eight zones: residential, rural, commercial/retail, Paraparaumu town centre, industrial service, open spaces, river corridor and conservation estate zones.

The plan strategy is one of continuing to provide employment and housing opportunities within currently urban zoned areas. However, within these zoned areas they are seeking

“to maintain the relatively low density character of existing development throughout the residential environment” (C.7.1. Objective 1.0)

and

“limit the density of built development in the proposed town centre of Paraparaumu” (C.4.1. policy 1.3).

Residential (C.7.1) policy 1.1 specifically encourages low density character by seeking to

“control the minimum area required for each dwelling in the residential environment, so that the low density character is maintained”

The minimum site areas are however similar to those specified by other Territorial Authorities in the region. Higher density residential development is allowed for as a controlled activity.

Mixed use is encouraged to a certain extent with the inclusion of the following residential zone policies:-

C.1. Policy 2.1 Home Occupation - to

“Permit professional, trade, crafts and other persons to carry out their business at home

C.1. Policy 2.3 Public Benefit - to

“Permit the continued development of non-residential activities where these do not adversely effect the amenity value of the area”

C.1. Policy 2.4 Non-school activities - to

“Enable the maximum utilisation of existing hall and school activities within the residential zone”

Transport policies are undergoing a revision to include

Policy C.18.1.8

‘Take into account the degree to which subdivision and development generally is designed to :

- reduce demand for travel, particularly by private vehicle;
- locate land uses in ways which facilitate efficient transport;
- provide road, pedestrian and cycling networks, and bus routes that promote walking, cycling and public transport as convenient alternatives to the private vehicle;
- introduce traffic calming measures that restrain the movement of private vehicles;

when considering resource consent applications.

Policy C.18.1.9

“Encourage and promote new development and activities that operate and locate in a manner that uses public transport networks efficiently and promotes ease of use by transport modes other than the private car”

Kapiti Coast have identified a district wide walkway/cycleway/open space system. This is incorporated in the District Plan as a policy under section C.11.1 to

“Develop a walking and cycleway system in co-operation with landowners and other agencies, linking areas of open space, ecological reserves, schools, commercial and community facilities, public transport and residential adjoining land owners.”

The walkway and cycleway routes are indicated on the Proposed District Plan Planning Maps. A complementary objective (C9.1) is to facilitate public access to and along the coast, the Plan requiring the creation of Esplanade Reserves along the entire coastline of the District.

As Kapiti Coast is expected to receive much of the growth of the region its approach to development is very significant. There is a desire to reduce the demand for travel and encourage modes of transport other than the private car, however, their emphasis on maintaining a low density of development is not supportive of public transport, cycling or walking and the plan therefore contains conflicting policies.

5.3.3 Lower Hutt City Council

Proposed District Plan - City of Lower Hutt 5 December 1995

This plan identifies twenty two distinct Activity Areas where differing objectives, policies and rules apply.

The Council is seeking urban consolidation by having a policy of generally consolidating existing residential development whilst allowing some limited greenfield development adjacent or close to existing development. A higher density of development will be permitted in areas adjoining transport nodes, such as along the railway corridor, district distributor roads and commercial areas.(Issue 1.10.2).

Retail activity is to be grouped in centres categorised as suburban commercial, Petone commercial and central commercial.

A stated objective which supports limiting the need to travel greater distances is
“to maintain suburban commercial centres close to residential areas and support where possible, the community focus associated with such centres”

Due to concern about the continuing viability of existing suburban centres retailing is to be restricted in non-commercial areas.

Mixed use is supported by a policy to encourage residential use in commercial areas

Policy 4.A..1.1.2.a.

“To allow residential activities to occur above ground level in all parts of the Central Commercial Activity Area”

and home occupations are permitted if they have no adverse effect (Policy 3.A.1.1.3.)

A policy (14.A. (i) 1.1.1.a.) is included under the Roading Hierarchy section as follows

“That adequate levels of service for access and movement are provided to meet the travel demand of pedestrians, cyclists and motorised traffic during the off peak period, with maximum safety for all users and local residents at all times”

The Council is seeking to limit the amount of private motorised traffic during peak periods. However, at the same time they wish to provide sufficient car parking space in the Commercial Activity areas (14A i.i.i.) and do not view restricted parking as a counterpart to increased use of alternative transport modes.

Requirements for bicycle parking are included in this District Plan (14A9iii)2.1 (e). The rules set down standards for places of employment, assembly or entertainment, which could usefully be extended to include transport interchanges.

This plan seeks to direct development in a manner which is supportive of less private motorised vehicle use and there is scope for further developing this approach in practice.

5.3.4 Porirua City Council

Proposed Porirua City District Plan, Annotated version October 1995

This plan divides the district into four zones: City Centre; Industrial; Suburban and Rural.

The principle of containing development is pursued through the policy of not allocating any more land outside the existing suburban area.

Policy C 3.1.2.

“To encourage the maximum utilisation of the existing infrastructure and resources by encouraging suburban activities in areas which are already serviced”.

The potential for increase in density is further encouraged through the decision to have no minimum size specified for allotments (p 53).

Mixed use is encouraged in the suburban zone through the following policy:

Policy 3.2.2.

“To allow non-residential activities which do not detract from the amenity values of the suburban zone”.

Concern is expressed about the decline of suburban centres and the following policy is included as a means to halt that decline:

Policy C.3.3.1.

“To allow a wide range of activities in the suburban shopping centre areas while ensuring any adverse effects on the environment are avoided, remedied or mitigated”.

In the transport section of the plan the Council seek to encourage public transport, cycling and walking with

Policy C.7.1.6.

“To encourage major new developments and activities in a manner that makes the best use of the City’s existing and proposed transportation network”

the accompanying explanation stating that ‘new development should take account of the need to use public transport networks efficiently and to promote ease of use by walking and cycling’ (p92)

The Council seeks to provide effective and efficient vehicle, cycle and pedestrian circulation networks within and around the city centre, with the following policies for pedestrian and cycling networks.

Policy C.1.2.3.

“To encourage the use of bicycles by reducing the potential for conflict between vehicles and bicycles”

Policy C.7.1.7.

“To encourage the use of bicycles for commuting, recreation and general access around the city”.

To this end the Council is developing a cycle network.

The Council wish to ensure continuity of routes, including cycleways and walkways and have a sub-division policy as follows:

Policy C.6.1.4.

“To ensure continuity of transport, road links, open space, walkways, cycle routes, sewer lines, water mains and other infrastructure services through proposed new areas of development and sub-divisions”.

In considering major schemes for sub-division the Council will identify the need for continuity.

In conclusion, Porirua City has in place the framework for creating a less car oriented city.

5.3.5 Upper Hutt City Council

City of Upper Hutt Transitional District Plan, Review no. 4, operative 31 August 1994

(N.B. The Proposed District Plan is due to be notified towards the end of 1997)

The Upper Hutt district is zoned into rural, residential, commercial, service, industrial and special purpose zones.

Two of the Council’s principal objectives in respect of this review of the District Plan are:-

“a) To contain urban development within the limits of present zoning leaving the balance of the city in rural use”

“b) To encourage the consolidation of urban development in order to fully and economically utilise community services facilities”

Permitted development space standards dictate a relatively low density, however, provision is made in the Plan for a higher density of development for controlled and discretionary activities and through a policy relating specifically to apartment building as follows:-

Clause 3 Policy 7

“To provide for apartment building development in suitable areas”

Suitable areas being those close to the main public transport corridor.

The Council wish to see high quality redevelopment and a greater use of infill housing within their main residential zone (Residential General).

Limiting the need to travel is aided by the encouragement of local shopping and services in residential neighbourhoods (Clause 5 Policy 1) and support for residents to undertake small businesses within their homes (Clause 3 Policy 13).

Under Clause 10, Transport, the Council include the following policy:-

Policy 8.

“To recognise the needs of cyclists within the urban area”

but no specific measures are identified in the Plan and town centre car parking is not restricted.

Although this Plan is generally supportive of public transport and pedestrian activity, there is scope for further development of the concept and measures to achieve greater cycling activity.

5.3.6 Wellington City Council

Wellington City Proposed District Plan July 1994

Wellington City has zoned its area into outer residential, inner residential, suburban centres, institutional precincts, airport precinct, central area, rural, open space and conservation zones.

One of the main aims of the Plan is to contain and intensify development as stated in

Specific Issue 1 “The plan works towards general containment of city expansion and the intensification of development within the existing urban boundaries”.

The following policies are used to support this aim.
Wellington City will:-

In residential areas

Policy 4.2.11.

“Encourage new urban development to locate within the established urban area”

Policy 4.2.1.3.

“Encourage sub-division design and housing development that optimises resource and energy use”

Policy 4.2.4.1.

“Permit infill sub-division within suburban areas subject to conditions or criteria which ensure adverse impacts are mitigated and that sites are suitable for intended uses”

Development of greenfield sites (Policy 4.2.4.2) will only be considered (and therefore controlled) as a District Plan change.

In suburban centres

Policy 6.2.1.1.

“Generally contain existing suburban centres within defined boundaries”

In the central area

Policy 12.2.1.1.

“Contain central area activities and development within a defined boundary”

In the central area higher densities are encouraged, whilst the space standards for residential areas are such that higher density development can be accommodated,.

The encouragement of mixed use is identified as Specific Issue 4

“A greater mix of compatible non-residential uses will be supported”

This desire is backed up with the following policies. Wellington City will:-

Policy 4.2.1.2.

“Provide for a greater mixture of residential and non-residential activities within residential areas, provided character and amenity standards are maintained”

Policy 6.2.1.2.

“Encourage a wide range of activities by allowing most uses or activities within a suburban centre”

Policy 12.2.1.2

“Encourage a wide range of activities within the central area by allowing most uses or activities provided that the conditions specified in the Plan are satisfied”

The Council wish to improve standards of access in residential areas, suburban areas and the central area. To this end the Council will

Policies 4.2.9.1, 6.2.8.1 and 12.2.8.1

“Seek to improve access for all people including those with disabilities”

Policies 4.2.9.5, 6.2.8.5 and 12.2.8.5.

“Protect and enhance access to public spaces in all parts of the city.”

The Council have a policy of restricting car parking in the central area

- Rule 13.1.1.7.1.

“...where parking is provided it must not exceed a maximum of 1 space per 200m² gfa in the inner sector, or 1 space per 150m² gfa in the outer sector.

This Plan is very conducive to the increase of pedestrian activity and although it does not specifically deal with public transport its policies and methods are supportive of public transport, but cycling has been largely ignored.

5.3.7 Summary of Supportiveness of District Plans

Table 1 summarises the degree to which the District Plans support the reduction of private motorised vehicle use.

Table 1: Assessment of the degree to which the District Plans support the reduction of private motorised vehicle use

ISSUE	Contain-ment	Increased Density	Mixed use	Public transport	Pedest-rians	Cycling
Carterton District	4	σ	σ	0	σ	σ
Kapiti Coast District	σ	6	σ	0	4	4
Lower Hutt City	4	4	σ	4	σ	σ
Masterton District	Not available					
Porirua City	4	4	4	4	4	4
S. Wairarapa District	Not available					
Upper Hutt City	4	4	σ	σ	4	σ
Wellington City	4	4	4	σ	4	0

Issue emphasised 4 Issue mentioned σ Issue not dealt with 0 Issue opposed 6

Table 2: Permitted Residential Development Standards

TERRITORIAL AUTHORITY	CONTROL	Minimum site area	No. Of units per site	Site Coverage	Front yards	Side yards	Rear yards
Carterton District	Urban Residential Average (3 or more lots)	400m ² 500m ²	1+1 accessory flat	50%	4.5m	1.5m	3m
Kapiti Coast District		450m ²	1+ 1 family flat	40%	4.5m from road	3m*	3m
Lower Hutt City	High density development Elsewhere	300m ² 400m ²	-	40% 35%	3m 3m	1.5m 1.5m	1.5m 1.5m
Masterton District	Not Available	N//A	N//A	N//A	N//A	N//A	N//A
Porirua City		none	2*	35%	5m	1.5m	1.5m
S. Wairarapa District	Not Available	N//A	N//A	N//A	N//A	N//A	N//A
Upper Hutt City	Residential general zone Front sites Rear sites Corner sites	400 or 500m ² 600m ² 550m ²	1+1 family flat	35%	4m	One of 1.5m One of 3m	3m
	R.conservation zone Front & corner sites Rear sites	750m ² 900m ²	1+1 family flat	30%	6m	3m	3m
Wellington City	Inner residential area	none	2	50%	1m	none	none
	Outer residential area	none	2	35%	3m*	none	none

* Varies in certain circumstances

5.3.8 Assessment of Density Determinants

Increased density is one of the fundamental requirements for a decrease in private vehicle use. Development controls which dictate how much land must be allocated to each residence have a profound effect on the overall density of development in an area. Table 2 overleaf, summarises the standards contained in each District Plan.

This brief comparison of development control standards indicates that Porirua City and Wellington City are allowing smaller lot sizes as permitted development, whilst elsewhere a minimum site area of between 400 and 500m² is the norm, giving a net density of between 20 and 25 units per hectare. Site coverages of between 35% and 50% allow for a sizeable floor area of 140-250m² for single storey development. Minimum side yard dimensions ensure that development is spread out. These controls are therefore perpetuating a low density style of development. Other controls such as minimum frontage widths and access road dimensions all help to disperse rather than contain development.

5.4 Other Documents Referred To

Longley Brett.

Report on Economic Impacts of Wellington Regional Council and Wellington City Council Transport Policies, WRC, October 1992

Marsh, D.R. *Managing Traffic Demand in Wellington*, Works Consultancy Services, June 1991

Land Transport Safety Authority (Wellington Region) , Wellington Regional Council, NZ Police (Region No. 4), Wellington Region Road Safety Working Group, *Wellington Road Safety Strategy*, January 1996

6. Consultations

6.1 Introductory Workshop

An introductory workshop was held in Wellington in May 1997. It was attended by the Chairman, Deputy Chairman and most members of the Wellington Regional Council's Transport Committee. In addition all constituent Local Authorities from Masterton to Wellington City were represented by elected councillors, transport planners and urban planners, a total of fifty officials. The useful discussion and exchange of ideas which ensued provided valuable feedback for use in the preparation of the guidelines.

6.2 Territorial Authorities

Subsequently, representatives of the four City Councils and one of the Districts, were met individually, to discuss in more detail both the scope of the study and the level of support in the existing and emerging statutory and guidance documents of their Authorities. Where possible the officers spoken to were those who had attended the preliminary seminar.

6.3 Transit New Zealand

A meeting was held with Transit New Zealand (Wellington Region) to discuss the policies and practices relating to cycling and the State Highway system.

6.4 Safety Organisations

Discussions were held with the Land Transport Safety Authority (Wellington) and the Wellington Regional Council, Road Safety Co-ordinator.

The views of Safekids (a service of Starship Children's Hospital of New Zealand), a pressure group concerned (among other things) with the safety of school age children on New Zealand streets, were sought.

6.5 Cyclists

It was considered most important to understand the experience of those who cycle in the Wellington region. To this end a meeting was held with members of Cycle Aware Wellington, a local cycling pressure group. A further insight was obtained through a one-day field study prepared by a regular Wellington cyclist (see Appendix Three) Details of the dates and attendees of meetings can be found in Appendix Four.

7. The Guidelines

7.1 Purpose

The guidelines document has been designed to give straightforward advice about actions which may be taken and methods which can be used by those involved in managing the built environment. The guidelines indicate ways in which land use planning and design measures can lead to forms of development which encourage less private car use and support cycling. They range from fundamental planning practices such as the containment of urban sprawl, through the reallocation of space to accommodate cyclists, to detailed supporting measures, such as the provision of cycle parking facilities.

The guidelines are intended to be utilised by Local Authorities, developers and consultants throughout the Wellington Region.

7.2 Format

The guidelines are organised into three chapters corresponding to the following subject areas.

- **Land Use Planning**
Land use practices, patterns and policies determine the degree to which environments are cyclist supportive. This chapter considers the necessary change of emphasis in land use planning required to facilitate cycling.
- **Urban Design**
This chapter considers how cycling can be supported through the layout of urban form and the design of streets and public space.
- **Processes and Incentives**
Other actions which may be taken by local and regional governments and developers are discussed in this chapter.

Each of the chapters is divided into a series of guidelines dealing with a particular aspect of land use planning, urban design or other types of action.

Each individual guideline is further categorised according to the spatial planning scale to which it applies: regional; district or site specific.

Regional scale guidelines are concerned with strategic and policy issues which operate at the regional level. District scale guidelines refer to district-wide matters coming under the jurisdiction of Local Authorities, whilst site specific guidelines relate to localised actions.

Each guideline is introduced with a brief background description of the problem or need for the guideline. This is followed by a series of actions, i.e. statements of what to do. The methods section indicates what mechanisms may be used to implement the actions. These mechanisms being statutory provisions such as national and regional policy documents, annual plans, district plans, sub-division rules, resource consents and building consents as well as roading proposals, structure and concept plans and design guidance. In order to ensure that progress is being made towards supporting cycling, various means of monitoring are given.

Two examples of the guidelines are included as Appendix Five

Appendix 1

Bibliography

Appendix 1: Bibliography

1. Austroads:
Guide to traffic engineering practice - Part 14, Cyclists, 1993

A manual to provide guidance on engineering aspects of providing for bicycle riders. The first two chapters look at bicycle travel and considerations in planning for it. The main goal of bicycle planning is identified as encouraging cycling as a desirable alternative form of transport. Chapter Two -Planning for Cyclists is of particular relevance, giving useful guidance on preparing a bicycle plan. The remaining six chapters give design details for cycling provision.
2. The Department of Transport and the Institution of Highways & Transportation (U.K.),
Cycle-friendly Infrastructure, Guidelines for Planning and Design, 1996

This book describes best practice in providing for cyclists. The Guidelines detail highway matters as they relate to cyclists, not just cycling facilities. The emphasis is on engineering matters, i.e. what to do and how to do it. The guidelines are aimed at professionals working within a policy context which promotes cycling. A Local Authority Action Plan provides a useful checklist, see Appendix Two.
3. The Institution of Highways and Transportation with the Department of Transport. (U.K.).
Transport in the Urban Environment, June 1997

A guide to good practice which has evolved through many revisions since 1965. This manual which is widely used in the U.K., provides guidance on urban transportation planning . Part 3 concerning traffic management has chapters on facilities for pedestrians and measures to assist cyclists and buses, whilst Part 4 covers highway and traffic considerations for new development.
4. Department of the Environment Transport, Department of Transport, U.K.
Residential Roads and Footpaths, layout considerations. Design Bulletin 32, second edition H.M.S.O. 1992

A complementary document to Transport in the Urban Environment (3), it concentrates specifically on residential areas and is the result of a considerable amount of research into how such areas are used by people and traffic. It discusses road patterns and hierarchies, looks at the design of roads, footpaths and shared surfaces, gives dimensions for footpaths, roads, kerb radii, junction spacing, parking spaces, vehicle turning etc. It also has a section on improvement schemes in existing residential areas.

5. Auckland City :
Cycling & walking strategy, Draft February 97,

This Strategy considers recreational and commuter cycling as well as walking. It is intended as both a reference and a working document. The strategy vision is “To make cycling and walking safe and attractive in Auckland city for existing and potential users”

It details a five year programme of projects, concentrating on forming a city-wide network of cycle routes and seeks to expand and enhance the existing pedestrian network.

6. Untermann, Richard. K.
Adapting towns and neighbourhoods for walking and bicycling. 1984

Although written thirteen years ago this book contains a wealth of practical measures for adapting existing neighbourhoods to accommodate cyclists and pedestrians. Many of the ideas have been taken up by later works.

7. Environment, Department of & Transport, Department of, U.K.
Planning Policy Guidance (PPG 13) Transport, March 1994

and

PPG 13 A Guide to Better Practice - Reducing the need to travel through land use and transport planning. H.M.S.O undated c.1995

These two documents set out the British Government’s policy on transport, with the guide elaborating upon the advice found in the guidance note. It is incumbent upon Authorities to take the advice into account when preparing development plans. An over-riding aim is to reduce the need to travel. To this end the guidance states that existing urban centres should be revitalised and rural communities strengthened. Local Authorities should consider carefully the impacts on travel demand of all new development before consent is given. The maximum amount of housing should be allocated to existing larger urban areas or failing this in locations which can be well served by public transport. Incremental expansion of houses in villages and small towns where travel needs are unlikely to be well served by public transport, should be avoided, as should sporadic housing in the open countryside. The guidance identifies locational policies for different uses which should be adopted in order to reduce the need to travel and emphasises the need to provide a range of facilities at the local level.

Although there is no national policy framework in New Zealand which requires a reduction in the need to travel, many of the principles contained in these two documents could be adopted within the Wellington Region.

- 8 Oregon, Tri-County Metropolitan Transportation District of

Planning & Design for Transit, March 1993
and
Planning & Design for Transit Handbook, January 1996

A report followed by a handbook which focus on the design and development of urban settlements from a public transit (including walking and cycling as well as bus and light rail) standpoint as opposed to a vehicle oriented one. The study focuses on Portland Metropolitan Region, a region experiencing growth, so, much of the material applies to new development. It states that: new growth should be planned, designed and built to support increased walking, transit use and bicycling. It characterises transit supportive development as concentrations of population & employment in corridors & nodes of good transit service. It needs a mix of appropriate land uses and requires the design of development and public right of way improvements to be pedestrian oriented.

The handbook includes two relevant sections. Section 1, Guidelines for Land Use & Transportation Plans & Section 2, Site & Building Design.

5. Newman, P; Kenworthy, J and Lyons, T
Transport Energy Conservation Policies for Australian Cities. 1990

A report summarising ten years of work on transport energy conservation policies for Australian cities. Based on extensive research and case studies, Newman, Kenworthy and Lyons identify a negative correlation between petrol consumption and density, that is, the greater the density the less the amount of petrol consumed and by inference the greater the use of non-petrol consuming transport modes. The authors suggest that cities such as Sydney are at the stage where a choice must be made whether to follow the low density, increased car dependence of many American cities or the more compact European example.

10. Carley, Prof. Michael, jointly with Donaldsons
Sustainable transport and retail vitality, State of the Art for Towns and Cities
Historic Burghs Association of Scotland, Research Paper no.2, with Transport
2000, November 1996

This paper arose out of concern about the health of town and city centres in Scotland. It looks specifically at the relationship between sustainable modes of transport and retail vitality. Car borne shoppers are having a two-pronged effect on shopping centres. The first effect, is a direct one, causing traffic congestion and devotion of large amounts of space to car parking, in existing centres. so degrading the environment. .The second effect is caused by the proliferation of out-of-town retailing which is drawing shoppers away from existing centres. This is leading to a decline in the quality of those retail locations which are accessible on foot, by bicycle or public transport.

11. Ed. Tolley, Rodney :
The Greening of Urban Transport - Planning for walking & cycling in Western Cities, Bellhaven Press 1990

A collection of essays on the theme of planning for walking and cycling. Its three sections examine the principles, strategies and practice of 'green' transport planning. Collectively the essays argue for pedestrian oriented towns. Examples of policies and practices in Britain, Germany, Holland and America are included. Much of the good practice is found in Germany which is making a nationwide push to reduce motorised traffic and improve public transport. An analysis of how American settlements have become so alien to the pedestrian can be taken as a warning to those places which are in earlier stages of the same scenario.

Although measures such as devoting more space to the pedestrian whilst reducing the amount available to the car, traffic management and pedestrian and cycle networks are all seen as steps in the right direction, the final message of the book is that the 'red' modes (i.e cars) have to be checked to allow the 'green' modes to function.

12. Williams, James and Larson, Jan
Promoting Bicycle Commuting: Understanding the Customer
Transportation Quarterly, Vol 50, no.3, Summer 1996

This article looks at who actually commutes to work by bicycle, i.e. mainly young males and then goes on to examine why a larger share of the population do not use bicycles for commuting. The key factors which determine whether someone will commute to work are identified as : distance; values and attitude; family responsibilities; work requirements (dress and appearance); access and routing; traffic safety; weather; storage/shower facilities and employer and peer support.

13. Michels, Theo.
Still more bikes behind the dikes: reader on.
Centre for Research and Contract Standardisation in Civil and Traffic Engineering -
C.R.O.W., The Netherlands September 1992.

A series of papers relating to cycling issues in the Netherlands. Among the topics are the National Bicycle Policy, promoting the use of the bicycle, the safety of roundabouts for cyclists, bicycle parking at stations.

14. Wood. C.
Trams and Bikes - Friends or Foes.
Light Rail and modern tramway pp 372-375, 1995

This article looks at the areas of conflict between public transport (particularly trams and light rail), and cyclists and suggests ways in which they may be better integrated.

15. Austroads
Guide to traffic engineering practice - Part 10 Local Area Traffic Management
1988

Discusses the methodology for undertaking traffic management studies and implementing schemes.

16. Devon County Council, Engineering & Planning Department (U.K.),
Traffic Calming Guidelines, 1992

This book illustrates ways in which traffic can be calmed. Its aim is to stimulate thought leading to action and contains many ideas and examples of how safety and appearance of the street environment can be enhanced. Case studies are presented from towns and villages in England, Germany and Holland.

17. McClintock, H and Cleary, J,
Traffic Calming - The Cyclist's Viewpoint,
Current Issues in Planning, Volume 2, 1995.

Features of traffic calming schemes which are hostile to cyclists are outlined, followed by a number of measures which can be taken to ensure that traffic calming schemes are more cycle friendly.

18. Pettinga, A.D.
Integration of land use planning and bicycle planning
C.R.O.W. Record 9, Cycling in the city, pedalling in the polder, recent developments in policy and research for bicycle facilities in the Netherlands, pp.77-88

19. *Planning for and Promoting Cycling in Urban Areas, The proceedings of the symposium, 15 October 1997,*
Centre for Continuing Education, University of Waikato

A wide ranging collection of papers presented by planners, engineers, cyclists and health and safety organisations.

Appendix 2
Local Authority Checklist

Appendix 2: Local Authority Checklist

Local Authority Cycling Action Plan

Source: Cycle-Friendly Infrastructure, The Department of Transport and The Institution of Highways and Transportation, U.K. 1996

ACTION PLAN

There is potential for a very wide range of measures to promote cycling in all its aspects. The following Action Plan is suggested as a basis. It recognises that engineering measures are only one element of a strategy to promote cycling.

The following measures should be introduced or supported by the local authority.

1. Placing cycling in context

Consider the hierarchy of measures proposed in the Guidelines
Integrate cycling into transport studies, Development Plans, TPP bids, environment, education, health and leisure strategies

2. Planning Phase

Demand Aspects

Measure cycle use (1991 Census, cordon counts, surveys, etc)
Assess the potential (modelling policy options) and set targets
Identify existing routes and desire lines

Supply aspects:

Develop network plans
Identify cycle parking locations
Plan promotion and information
Review traffic management arrangements (one-way streets, pedestrian areas, etc.)
Review arterial and ring road conditions for cyclists
Identify cyclists accident locations and other hazardous sites, e.g. large roundabouts

3. Implementation

3.1. Transport

Publish a report on the above
Appoint a full-time cycling officer
Set up a cycling forum
Establish necessary internal and inter-agency mechanisms
Identify funding sources and establish targets
Develop a cycling strategy with targets
Publish a network plan
Update development plans, urban transport strategies and TPP policies

Establish Cycle Audit procedures
Include cycling in safety audit procedures
Translate plans into TPP bids (Minor Works and Packages)
Publicise cycling as a valuable and serious mode of travel

3.2 Land Use Planning

Promote development in accordance with PPG 13, particularly
“car-free” areas and developments
locate development so that it is accessible to cyclists
minimise development that is car dependent

Adopt policies which require developers to:
provide cycle access to the planned network
install secure cycle parking to satisfactory standards
include cycle storage facilities in new housing development

3.3. Leisure

Develop a network of signed, attractive, lightly trafficked routes
Promote cycling access to the countryside
Press public transport operators to carry cycles
Publish route leaflets

3.4. Health Promotion

Publicise the health and fitness benefits of cycling
Encourage employers to provide cycle parking and showers
Encourage employers to pay cycle mileage allowances for short business trips

3.5. Education

Provide cycle parking at schools and colleges
Encourage secondary schools to promote cycling to school
Develop safe routes to school
Provide cycle proficiency training for all school pupils
Promote an understanding of the environmental and health issues of green transport

3.6. Inform the public

Campaign on
-short journeys
-modal choice
-environmental impacts
-health and exercise
-cycle routes and parking

4. Taking a lead

Become a CTC- accredited cycle friendly employer (mileage payments, loans, parking, changing, etc.)

Take part in National Bike Week

Encourage senior officers to cycle to work

Provide prominent cycle parking at all council buildings

5. Monitoring and Review

Establish performance indicators for

--cycle use and modal split (counts, surveys, census)

-journey times (surveys)

-route quality (directness, continuity, coverage)

-safety (usage and accidents)

Monitor implementation against programmes and budgets

Appendix 3
A Cyclist's Review of Cycle Facilities
in the Greater Wellington Region

Wellington Regional Council

Land Use Cycling Guidelines
A Cyclists Review of
Cycle Facilities in the
Greater Wellington Area

October 1997

Prepared by
Mr Geraint Bermingham
a local Cycle Commuter

Contents

1. Summary	1
2. Introduction	2
3. Methodology	2
3.1 General Approach	2
3.2 Cycling Facilities	2
4. Present Facilities	2
4.1 Information	2
4.2 City Centre Facilities	3
4.3 Waterfront Facilities	3
4.4 Evans Bay Parade	7
4.5 Old Hutt Road	8
4.6 Hutt Motorway	11
4.7 Petone Esplanade	12
4.8 Eastern Bays	12
4.9 Integration into Public Transport	13
4.10 Other Natural Cycle Routes in the Region	13
4.11 Assessment of Present Facilities	13
5. Practically Achievable Facilities	14
5.1 General Principle	14
5.2 Major Routes	14
5.3 Basic Requirements	14
5.4 Simple Alterations and Low Cost Safety Measures	14
5.5 Purpose Built Cycle Ways	15
5.6 Hutt/Wellington Route	15
5.7 City Coast Line	16
5.8 Hutt Valley	17
5.9 Other Important Routes	17
5.10 Integrating into Road Planning	17
5.11 Integration into Other Transport Systems	18
6. Potential Benefits	18
7. Conclusions	19

1. Summary

A review of cycle transport facilities in and around Wellington was carried out by a local cycle commuter. This resulting report, produced as part of a study into land use and urban design guidelines for the support of cycling in the Wellington Region, is a personal view by an independent resident who has no connection with any transport lobby or other special interest group.

The physical investigation of cycle facilities was restricted to the greater Wellington City area however comments relating to the whole of the region are included.

The report identifies that presently;

- there are few cycling facilities in place
- those facilities that are in place are of very poor design and implementation
- there is no encouragement for the community to consider cycling as a transport option.
- no attempt has been made to integrate the use of bikes into other public transport networks

The result of this situation is that:

- the local community is denied a transport option and are the poorer for it
- the city and region cannot be seen as forward thinking in their attitude to transport or the community.
- The capital region of New Zealand, a country seen by the world as being peopled by active individuals with pride in their “clean and green” environment, cannot be considered “World Class” or progressive, even when compared with some East European cities.

However, there is clearly great potential for the development of a very credible cycle network. If well designed, and carried out with commitment, a network of cycleways and other facilities could effectively overcome all of the above shortcomings, and allow the region to hold its head up in the world community.

2. Introduction

This report discusses an individual's view of the present and potential cycle transport facilities in the greater Wellington area.

It is based upon a one-day review conducted by a resident of the area, a car owner who chooses to commute to the city by push bike or ferry. The review and its outline are completely independent of any related interest groups.

3. Methodology

3.1 General Approach

The study is based upon a day spent travelling around the greater Wellington area. Although the author concentrated on the harbour region, as the flat land in this area offers obvious potential as a hub for a cycling network, other parts of the Region were considered.

3.2 Cycling Facilities

Most time was spent investigating existing cycleways and those routes known to be used by cyclists. Throughout the study it has been taken that there are two main reasons for using a push-bike; commuting and leisure.

4. Present Facilities

4.1 Information

The first step of the review was to visit the Wellington City Information Centre to establish the level of encouragement for cycling by the City and the Region. Although there were a number of pamphlets on mounting biking in the regions parks, there was no information on cycleways or cycle commuter facilities. Indeed the attendant seemed somewhat embarrassed by her inability to offer any positive advice or information.

None of the available route maps indicated the presence of cycleways, preferred routes or facilities. In addition, none of the information on bus or train services made reference to the ability or otherwise to carry bikes on, or connecting to these services.

4.2 City Centre Facilities

A visit to the area around the Civic Square revealed a number of recently constructed bike racks) These were additional to the existing bollards that incorporate cycle locking features.

4.3 Waterfront Facilities

The areas around Frank Kitts Park and Queen's Wharf were investigated as many cyclists use the waterfront for both commuting and leisure. The first impression one gets of this area is both the potential that it offers and the ease with which this could be realised.

This otherwise very attractive commuting and leisure route is presently spoilt by a number of features, in particular obstacles that cause choke points to form.. Examples include inconsiderate parking (see Photograph 1), posts and chains (see Photograph 2), blind corners (see Photograph 3) and relatively narrow paths (see Photograph 4). It was very apparent that all of these problems could be overcome very simply and cheaply.



Photograph 1 - Inconsiderate parking



Photograph 3 - Obstacles on the waterfront



Photograph 3 - Blind corners



Photograph 4 - Narrow paths

The same conclusions were drawn in the waterfront areas around the new Museum, Te Papa, and Chafers Marina.

Oriental Bay Parade is again an area that would appear to offer much potential. However, the large number of pedestrians will, even with the present separation markings, always prevent the footpath from being a viable commuter route.

It was noted that the present cycle lane ends abruptly at each end of the Bay with no attempt to integrate the scheme with the road system or the remainder of the waterfront.

Photographs 5 and 6 demonstrate that the lane has been poorly designed with rough surfaces, abrupt ends and no significant warning to drivers at the Fryberg car park. As this lane is clearly only suited for slow speed leisure cycling there is a high probability of inexperienced adult and child riders using the lane. With no warnings to drivers crossing the lane there must be a significant chance of an accident between a rider and a car.

It was noted that during the 30 minutes that was spent inspecting this area, four cyclists went by on the road and none on the marked cycle path. This tends to confirm its suitability for leisure use only.



Photograph 5 - No warnings



Photograph 6 - Rough surface

4.4 Evans Bay Parade

The Evans Bay Parade road is shown in Photograph 8. This is a very popular route for both leisure and commuting cyclists. The photograph demonstrates both the space that could be made available for a purpose built cycle path, and the dangers presently faced by cyclists, particularly on the corners.

There is clearly great potential to develop a very appealing and practical cycle way around the Evans Bay coastline. It could feed a significant number of commuters into the city from the south eastern suburbs. In the short-term, as the road is wide, the simple use of road markings, and the construction of safety lanes would significantly reduce the risk to cyclists on the blind corners.



Photograph 7 - Evans Bay Parade Road

4.5 Old Hutt Road

The existing cycleway that runs from Thorndon Quay to Ngauranga has been used by the author and so its facilities were known from personal experience.

The presence of a large number of industrial units, each with access, leads to many traffic movements across the designated cycle lane.

Examples of many of the lane's shortcomings are shown in Photographs 8 and 9. These demonstrate the use of the lane as an access by cars, as a loading area, and as a parking area. In addition, blind bends, lamp-posts, deep gutters, and confusing markings all combine to make a very poorly conceived and in some aspects, dangerous facility.

It is noted that none of the most basic advice contained in the appropriate Australian road engineering guide (AUSTROADS, Part 14) has been applied. The large number of industrial accesses is the most significant problem. It was noted that one company had taken it upon themselves to warn drivers of cyclists.

The city end of the lane is of particular concern. As implemented it forms a significant risk to cyclists joining the traffic flow at a already difficult junction. Poor signposting and the presence of redundant road markings add to the confusion. When heading north, drivers are already hard pressed by the traffic joining from the left, and those slowing to

take a hard turn to the left. At peak times, when attempting to move to the island, a cyclist will be trying to move out with the traffic stream whilst also watching for slowing traffic in front and those joining fast from the left (see Photographs 10 & 11).



Photograph 8 - Cars using the cycle lane



Photograph 9 - Cycle lane being used as a loading area



Photograph 10- Poor signposting and busy junction



Photograph 11 - Redundant road markings

The author's own experience had resulted in the use of the road in preference to the path, as this was deemed to be safer. Anecdotal evidence suggests that many other cyclists have come to the same conclusion.

Thorndon Quay is particularly difficult for cyclists due to both the high number of truck movements from side roads and the diagonal parking system. The drivers of light trucks in particular find it difficult to see cyclists as they reverse out into the road. The use of parallel parking, to form a combined parking and cycle lane would open up greater road space for cyclists and allow drivers to see the road better before moving out.

4.6 Hutt Motorway

The route between the Hutt Valley and Wellington follows the coast and so is almost perfectly flat. Linking as it does the Hutt City with Wellington, the route has great potential as a commuter way for cyclists. At present many cyclists use the shoulders of the motorway to commute to and from Wellington during the week. In addition, a fair number of cyclists use the same route for leisure at the weekends. The full width shoulder on the south bound lane lends itself to reasonably safe cycling. The north bound side however, is narrow and is intersected by a number of ramps, and junctions (see Photograph 13).



Photograph 12 - Narrow north bound shoulder

The land between the motorway and the railway track includes a disused path and unused land (see Photographs 13 & 14). The path is sometimes used by cyclists heading north. However, as they approach Petone, the path narrows and finally ceases. The author has seen people carrying their bikes across the rail tracks at this point, as there is no real alternative. This path and associated land offer great potential as a highly practical cycleway.



Photograph 13 - Unused land

4.7 Petone Esplanade

The roading along the Esplanade presently makes no allowance for cyclists. Those heading east have many intersections to contend with. The seaward side is better, but does narrow in some places.

4.8 Eastern Bays

The Eastern Bays road to Eastbourne is used by both commuters and leisure riders. It does, however, appear fairly dangerous due to the many blind corners and at times, the volume of traffic. Buses, in particular, appear to cut close into the corners despite the possibility of cyclists being out of sight. Again, however, there is much unused space on most of the corners that could enable safety lanes to be easily incorporated on most of the tight bends.

Once in the Village of Eastbourne, the car-free waterfront path offers cyclists a pleasant route, whilst the Coast Path to the light house at Pencarrow and beyond is a major local recreational attraction. This last stage is spoilt by the use of a gate that is too narrow to allow bikes easy access. It is often small details such as this that can seriously reduce the credibility of cycle facilities.

4.9 Integration into Public Transport

It is noted that the East by West ferry company positively encourage the carrying of bikes on the ferry. This facility is used by both commuter and leisure cyclists.

There is little reason why the attitude exhibited by the ferry operator could not be taken up by the bus and train operators. This simple change alone would make the use of cycles in the region much more practical.

4.10 Other Natural Cycle Routes in the Region

Within the Wellington City area, the coast road to Seatoun is a pleasant and relatively safe route for leisure cycling. Other routes that would be useful would include those based around Adelaide Road, Tinakori Road, and Evans Bay Road.

Within the Region, SH2, the Rimutaka Incline, and many of the roads in the Wairarapa, as well as routes along the Kapiti Coast all lend themselves to the formation of leisure or commuter cycle routes.

4.11 Assessment of Present Facilities

The present state of cycling facilities in the greater Wellington area is very poor and lags significantly behind the standard now being achieved in many areas of the developed world. It was of particular note that not even the most basic requirements of the relevant part of the Australian road engineering guide are being met by the very limited facilities presently in place.

Of greatest concern is the one significant attempt by local authorities to construct a cycle path, on the Old Hutt Road, is of such poor standard that many cyclists consider it safer to ride on the adjoining busy road.

5. Practically Achievable Facilities

5.1 General Principle

Having assessed the local cycling facilities, the potential for improving the current situation was considered. The proposed changes were to be restricted to those that could reasonably be considered to be simple and readily practical.

5.2 Major Routes

It is considered that the Wellington area offers a number of natural routes that could form the backbone or hub of a very credible regional cycle network. Although the Region is split by two major areas of high ground many parts are essentially flat. The most significant of these are the coast around Port Nicholson, the Hutt Valley, the Wairarapa, the Porirua Harbour area, and the Kapiti Coast.

A reasonable commuting distance could probably be considered to be limited to approximately 20 to 30km. It therefore follows that a practical cycle network would most likely be made up of sections of fast high quality commuter routes linked by less direct and slower leisure routes.

5.3 Basic Requirements

Part 14 of the AUSTRROADS Guide to Traffic Engineering sets out general requirements for cycle ways. It makes the distinction between commuter routes and those designed with recreation in mind. It is clear that, to be attractive to potential commuter cyclists paths must be well designed and constructed. In particular, there must be few points where cyclists are forced to slow down. It therefore follows that to develop a credible cycle commuter network, a commitment to a cycle network needs to be made by the appropriate funding and planning bodies.

Leisure routes do not need to be as purposeful in concept and so could probably be made by improving and widening existing paths, lanes and roads. These could be integrated into the road system by linking with additional paths and access points.

5.4 Simple Alterations and Low Cost Safety Measures

The risks posed by many of the hazards faced by the regions cyclists could be reduced significantly at little cost. A number of the alterations required to achieve a significant reduction in risk are listed below. They include:

- Use of safety lanes on the inside of blind corners and squeeze points.
- Use of rumble strips between the main traffic lane and cycle lanes marked on the road.
- Replacing diagonal parking with parallel parking zones and using the extra space to form a shared car parking and cycle lane.
- Improving the road surface to make it both safer and faster for cyclists.
- Erecting warning signs and clearly marking the cycle lane at traffic access points.
- Using coloured road surface for cycle lanes at particularly dangerous points and where pedestrians and fast cyclists may meet.

5.5 Purpose Built Cycle Ways

The purpose built commuter ways would need to incorporate all the rules given by the Australian traffic engineering guide or similar European Codes. In some cases land would probably need to be allocated to new routes to ensure that users can maintain a fast and yet safe speed without interference from other travellers.

5.6 Hutt/Wellington Route

During the study it was noted that there is presently a ribbon of land running along much of the side of the Wellington to Hutt railway line (photographs 13 & 14). If made available for development this strip could make an excellent two way cycle route. There are only a few points along this route where it would be necessary to carry out a significant amount of engineering. The most notable point is at the Te Puni bridge where the rail and motorway close together (Photograph 14). At this point it may be necessary to narrow the shoulder and take the cycle path up and over the bridge.

The much talked about road improvements from Te Puni north, when undertaken, offers an ideal opportunity to construct a purpose built cycle way along the same stretch of road. This could then be integrated into the Petone and Lower Hutt road systems.

The construction of the Stadium again opens the opportunity to integrate a new purpose built cycle way into the existing transport systems. In particular the stadium could overcome the presently unpleasant and potentially dangerous Thorndon Quay part of the route into the City.

If constructed to a high standard and integrated thoughtfully into the road systems at both the City and Hutt ends, it is probable that it would attract many people to take up cycle commuting between Wellington and the Hutt Valley.



Photograph 14 - Path narrows at Te Puni

5.7 City Coast Line

The coast line from Waterloo Quay to Kilbirnie and beyond invites the opportunity to construct a cycle route that would not only aid the transport system but would also be a major asset that Wellington City could be proud of. As with the Hutt Motorway route much of a new cycleway could be constructed with few major works being undertaken.

Some of this route would require two separate systems. In particular Oriental Bay will need to retain its existing leisure route. Additional cycle lanes marked out on the road would be required to attract cycle commuters.

Cycle lanes marked on roads leading through Kilbirnie and Miramar would help to draw cyclists safely to the purpose built cycle way, and on to the coast at Island Bay and Seatoun.

5.8 Hutt Valley

Being centred along the Hutt river, the valley lends itself to ease of access from one main cycle way. The shoulders of SH2 lend themselves to high speed cycling. However, these are probably only going to attract high speed and experienced cyclists. To attract slower, and younger people it would be necessary to construct a route along the general line of the existing river bank paths. By using these it would be possible to develop cycle paths that would be scenic and pleasant whilst also remaining highly practical.

5.9 Other Important Routes

Other areas that would benefit from cycle facilities include villages and towns along the Kapiti Coast. In particular the construction of cycle facilities along the narrow sections of SH1 would significantly reduce the risks associated with cycling in this area.

As stated above, despite its present unsuitability the Eastern Bays road is used by many cyclists, both for leisure and commuting. In the short term, the simple addition of safety lanes on the blind corners and marking of lanes where the road allows would help to reduce cycling risks. With greater commitment it would be relatively simple to construct a pleasant and practical cycle way around the Bays. This could form a major asset to the harbour area and help to develop the local leisure industry.

Being flat and relatively quiet, the Wararapa could attract many leisure cyclists if they were well catered for. Many of the roads are wide enough to enable a cycle lane to be marked along the road. Even though the road is in some places narrower than the ideal, the use of markings would make drivers more aware of cyclists and hence reduce the chance of accidents.

5.10 Integrating into Road Planning

The presently poor availability of safe routes for cyclists is slowly getting worst. Each new road scheme that is built without some consideration of the needs of cyclists is progressively squeezing cycle users off the roads. This process will continue until the requirements of cyclists is integrated into the routine road planning and design methodology.

It is of note that the design of a recent widening scheme on SH2 north of Lower Hutt appears to have paid only lip service to the needs of cyclists. Although there are cycle markings, the road surface is so poor, and the shoulder so narrow, that cyclists will be in constant and unnecessary danger on this section of road. Another opportunity missed.

5.11 Integration into Other Transport Systems

The present lack of cycle awareness extends to the bus and train operators. Buses presently cannot carry bikes and the drivers appear intolerant to any requests or enquires on the subject. It is not difficult to conceive of a rack design that would enable two or three bikes to be carried on the front of buses in a similar fashion to the way push chairs are carried by buses in Christchurch.

There can be little doubt that positive encouragement by the rail and bus operators would make many more people consider a bike when planning their transport needs. The additional supply of secure bike lockers at regional train stations could encourage commuters to cycle to the stations thereby reducing the pressure for car parking space.

Quite aside from the use of bikes for part of a commuter journey, the use of a train to take bikes to further destinations such as the Wairarapa would help to encourage leisure activities in these areas.

It is important that integration into other transport systems is one of a number of measures that together form a credible and successful cycle transport policy.

6. Potential Benefits

The development in recent years of improved lightweight materials and a greater range of frame types has opened up cycling to a much wider range of people. This has led to much more awareness of the benefits of integrating bikes into the transport system. It is now common to see well designed, purpose built cycle facilities throughout Europe and other parts of the world.

The immediate benefits of attracting greater numbers of commuters to cycling are clearly summarised in the relevant AUSTROADS Guide. The most obvious include; reduced traffic congestion, parking needs, and pollution. However, less obvious are the credibility developed by a region when, by constructing an impressive and attractive cycle network, it is seen as forward thinking and oriented towards the health and well being of its community. With the usually benign North Island climate, the relatively low traffic densities, and a society oriented towards health and fitness, one would expect the capital region of New Zealand to have developed a World Standard cycling network. It is of note that even some of the old Eastern Block cities have established highly credible cycle networks, and in doing so are helping to establish themselves as modern, forward thinking, people oriented, world class cities.

7. Conclusions

The present cycle facilities in the region are very poor and it is felt, well below the standard an overseas visitor would expect of the capital region of New Zealand. This reflects badly upon the region and the country.

The topography of the area lends itself to cycling as a practical means of completing many journeys for a large part of the region's population.

A commitment towards cycling as a means of transport and recreation followed by the implementation of a number of simple and low cost measures would go a long way towards improving the situation. Integration of cyclists' needs into all road planning and design would ensure that cyclists are not progressively squeezed out of the transport network. Further longer term planning could see the region develop a very effective cycle network that could form a highly practical and attractive transport system, to the benefit of all the region's communities.

Appendix 4
Meeting Details

Appendix 4: Meeting Details

1. **Introductory Workshop, Wellington**

Date: 7 May 1997

Run by: Allen Crosby, Craig Cairncross, John Bolland, of Kingston Morrison and Tony Brennand, Wellington Regional Council

Attendees: see separate list overleaf

2. **Local Authority Visits**

2.1. **Wellington City Council**

Date: 25 July 1997

Present: Janet Reeves, Kingston Morrison
Ken Sims, Urban Design Unit, Wellington City Council

2.2. **Kapiti Coast District Council**

Date: 28 July 1997

Present: Janet Reeves, Kingston Morrison
Andrew Guerin, Policy Planner, Kapiti Coast District Council

2.3. **Porirua City Council**

Date: 28 July 1997

Present: Janet Reeves, Kingston Morrison
Tony Thomas, Resource Consents Manager, Porirua City Council
Jeff Robertson, Strategic Planning Manager, Porirua City Council

2.4. **Lower Hutt City Council**

Date: 26 August 1997

Present: Allen Crosby, Kingston Morrison
Earnie Albuquerque, Director of Planning, Lower Hutt City Council
Bob Alkema, City Transport Planner, Lower Hutt City Council

Wellington Regional Council
Supporting Alternative Transport Modes : Land Use Measures Seminar
7 May 1997

Discussion Groups

Team Red		Team Amber		Team Green	
Craig Cairncross	Facilitator	John Bolland	Facilitator	Tony Brennand	Facilitator
Mayor, John Terris	HCC	Mayor, John Read	SWDC	Mayor, Rex Kirton	UHCC
Cr. Terry McDavitt	WRC	Cr. Irvine Yardly	WRC	Cr. Sandraw Greig	WRC
Cr. Martyn Turner	WRC	Cr. Euan McQueen	WRC	Cr. Pat Christenson	HCC
Cr. Keith Barnard	UHCC	Cr. Findlayson	HCC	Cr. Bob Pope	KCDC
Cr. Andy Foster	WCC	Cr. Dennis Ferrier	KCDC	Cr. Alison Vance	MDC
Cr. Murray Woodhouse	PCC	Cr. Jim Wagg	MDC	Cr. Bill Hargreaves	MDC
Cr. Mike Gray	SWDC	Shaun Slattery	WRC	Nicola Stitt	WRC
Cr. Margaret Casins	HCC	Wayne Hastie	WRC	Dean McLaren	WCC
Cr. Kathy Spiers	KCDC	Lindsay Davis	WCC	Pauline Lyons	HCC
Cr. Rod McKenzie	MDC	Bill Flannery	MDC	Ross Smith	SWDC
John Holmes	WRC	Kevin Mangar	SWDC	Andrew Guerin	KCDC
Jane Bradbury	WRC	Jo Hewitt	HCC	Kevin Montgomery	MDC
Bret McKay	WCC	Peter Bailey	TNZ	Lachlan Wallace	UHCC
Fergus Power	KCDC	Iaian McIntosh	KCDC	Soon Kong	WCC
Sue Dahlberg	MDC	Malcolm Douglass	PCC	Tim Davin	PCC
Bob Alkema	HCC			Glen Inness	KCDC
Dave Armour	KCDC			Hamish Pringle	MDC

2.5. Upper Hutt City Council

Date 26 August 1997

Present: Allen Crosby, Kingston Morrison
Lachlan Wallace, Upper Hutt City Council

3. Transit New Zealand

Date: 27 August 1997

Present: Allen Crosby, Kingston Morrison
Stanley Chesterfield, Transit New Zealand, Wellington Region

4. Safety Organisations

4.1. Safekids

Date: 11 August 1997

Present: Allen Crosby, Kingston Morrison
Janet Reeves, Kingston Morrison
Reena Kokotailo, Director, Safekids
Isabel Smith, Information and Resource Centre Manager, Safekids

4.2. Wellington Regional Council

Date: 25 August 1997

Present: Allen Crosby, Kingston Morrison
Kevin Grace, Regional Road Safety Co-ordinator, Wellington Regional Council

4.3. Land Transport Safety Authority

Date: 27 August 1997

Present: Allen Crosby, Kingston Morrison
Michael Jacket, Regional Engineer, Wellington Region, Land Transport Safety Authority

5. Cyclists

5.1. Cycle Aware (Wellington)

Date: 27 August 1997

Present: Allen Crosby, Kingston Morrison
Michelle Emery, Cycle Aware
Darryl Coburn, Cycle Aware

6. Attendance at Cycling Symposium

Title: Planning for and promoting Cycling in Urban Areas

Date: 15 October 1997

Venue: The University of Waikato

Organised by: Centre for Continuing Education

Attended by: Allen Crosby, Kingston Morrison
Janet Reeves, Kingston Morrison

Appendix 5
Sample Guidelines

Chapter 2.0	Land Use Planning	Scale of development:	Regional/ District
--------------------	--------------------------	------------------------------	-------------------------------

Guideline 2.2	<i>Locate activities so that dependence on the car is diminished</i>
----------------------	---

Background

Dispersed development is not economical in terms of land take or provision of services, it is also not conducive to travelling by bicycle. Sporadic housing in the countryside, large suburban housing estates, retail outlets, workplaces and public services outside existing centres all necessitate travel by private car.

The topography of the Wellington Region has naturally led to its development in a linear fashion along the valley bottoms. This has been beneficial in that it creates a high degree of accessibility to the central corridors where activity is concentrated. Now that growth has reached areas, such as the Kapiti Coast where there is not the same degree of topographical constraint on the location of development, greater effort is required to maintain levels of non-car accessibility between

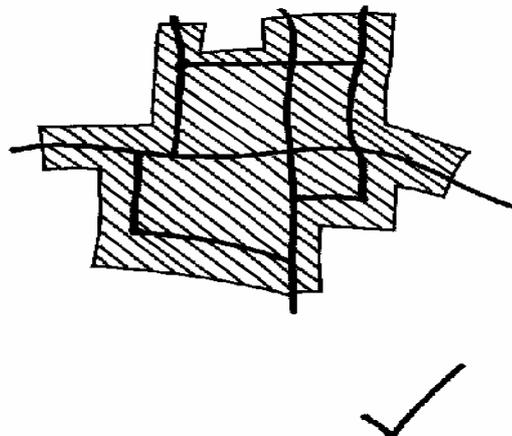
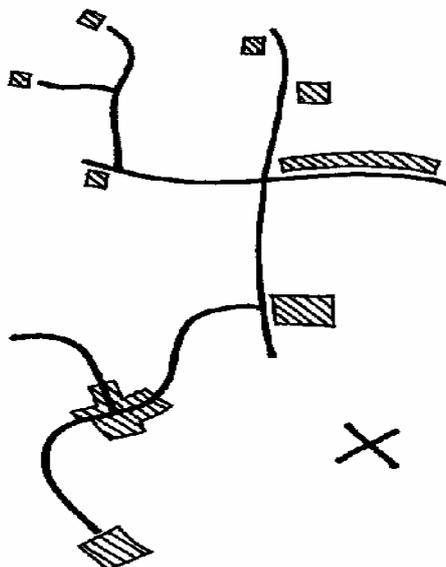
activities.

It is important to have a regional overview of the effects of urban development and major development proposals, since decisions made by one territorial authority could adversely effect the efforts of another

distant for commuting cyclists. Such locations not only necessitate car use but also support it through the provision of easier car parking than in town centres.

The impact of non-central shopping locations (such as close to motorway junctions or in industrial areas) on those who are not car drivers can be great, both in the difficulty in getting to the new facility and the decline of existing town centre shops.

New employment areas in peripheral



or inconvenient locations can be too distant for commuting cyclists. Such

locations not only necessitate car use but also support it through the provision of easier car parking than in town centres.

Action

Uses which generate and attract members of the public should be grouped together e.g. schools and other educational establishments, shops, housing, parks, hospitals and other health facilities, libraries, post offices and government offices.

When considering the location for:-

- retail, office and industrial development;
- schools, colleges and universities;
- local and district sport and recreational facilities;

attention should be given to how they will be accessed by cyclists and pedestrians (including those who are also public transport users).

Methods

District Plans should:

- Contain development within existing settlement boundaries, (providing there is adequate land);

- Encourage smaller facilities in more locations, rather than larger facilities in fewer locations;
- Encourage development on vacant and underutilised land within built up areas and village centres.

Proposals for major new developments such as supermarkets, sports centres, industrial or commercial premises should identify where customers, clients and employees are anticipated to come from and accordingly indicate appropriate cycle routes and distances.

Monitoring

Map all new development, so that the pattern of urbanisation can be monitored.

Collect data on a regular basis (annually) on the number of trips made by bicycle compared with the number made by private car, either through household surveys or roadside counts. Although numbers of cyclists can be variable, particularly due to weather conditions, it may be possible to assess whether there is any incidence of modal transfer.

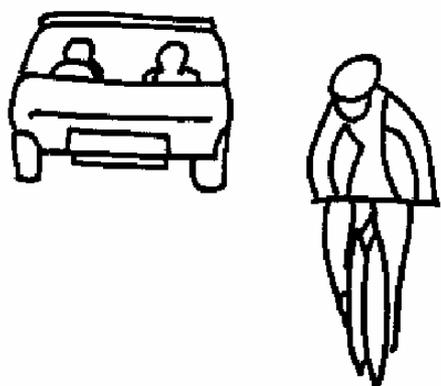
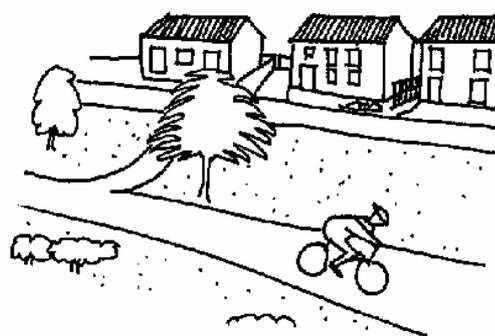
Chapter 3.0	Urban Design	Scale of development:	Site
--------------------	---------------------	------------------------------	-------------

Guideline 3.5	<i>Ensure that cycle facilities are overlooked or on public view</i>
----------------------	---

Background

People will understandably, not cycle if they feel vulnerable to attack. Places which are not overlooked, have no clear view in and out, have no means of escape once they have been entered and are dark are not likely to be used and this in itself makes them more unsafe. Cycle routes through underpasses, tunnels or cuttings, beneath bridges, between properties with high sided walls or with vegetation or structures which may conceal attackers are likely to be avoided for fear of attack.

there is plenty of pedestrian and vehicular activity and where the cyclist is visible at all times to other people.



Cyclists tend to feel safer when they are cycling on, alongside or near vehicular routes, since the passing traffic gives a sense of security to the cyclist.

In some cases however, paths will run through parks and reserves or other routes away from the road. These will be safer if they are overlooked by surrounding houses and the route is exposed rather than concealed. Heavy planting or landscaping which camouflages the route should be avoided.

Houses which are designed with doorways, steps, verandahs etc. at the front, (particularly if elevated) so that people can be seen coming and going and talking to neighbours and passers by help in the surveillance of cycle routes and have other security benefits.

Action

In order to provide the maximum deterrence to would-be attackers cycle routes should run through areas where

Where underpasses, tunnels and segregated routes across road bridges are unavoidable they should be short,

wide and well lit with a clear view through.

Lighting is important in ensuring the safety of the cyclist after dark. Care must be taken to ensure that there are not dark spots which could harbour attackers, such as behind bushes, high, solid boundary fences or building protrusions.

Methods

Existing routes which are perceived as dangerous should be identified and a programme of improvements such as installation of lighting, closed circuit television, pruning of shrubbery or rerouting sections, implemented.

During site planning, detailed attention should be paid to cycle routes to ensure that there will be casual surveillance from surrounding properties and roads and there will not be places that are concealed.

Measures should be taken to prevent the erection of high fences or hedges adjacent to rights of way or alleyways. District Plan rules for example could limit the height of boundary fences forward of the front building line of properties.

Monitoring

Proposed roading improvements should be vetted to ensure that cyclists are provided with routes where they will not feel vulnerable to attack.

Building applications should be vetted to encourage buildings to have windows overlooking areas which will be used by cyclists or pedestrians.

User surveys should be conducted to establish how safe cyclists feel.

Cycle groups could report regularly on the perceived safety of their members when cycling

.

