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Safe and pleasant cycling with the three P's…

Provision, Promotion and Policy

According to the ARC's Community Perception's Survey ***only 1% of Aucklanders find cycling "always safe"****. The key reasons for this are: too many vehicles, speed limits that are too high, aggressive driving, and lack of provision for cycling. This document outlines Cycle Action's recommended approach for improving cycling conditions to enable more Aucklanders to get out on their bikes.*

The following initiatives have multiple benefits; including improved conditions for walking, reduced emissions from transport, less traffic congestion, and a more vibrant and liveable Auckland attracting a skilled workforce needed to create a strong regional economy.

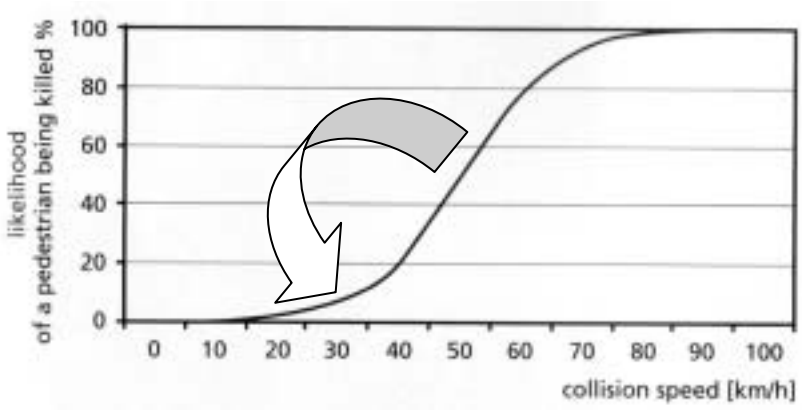
(1) Provision. Cyclists comfortably travel at 12 to 25 km/h - speeds which do not mix well with pedestrians or with high speed traffic. Further, cyclists have a wide range of skills and confidence levels. How do you cater for an 11 year old cycling to school, the 40 year old accountant who imagines himself in the Tour de France and a 65 year old grandparent who wants to cycle to the shopping mall?

The choice must be made to ***integrate or separate*** cyclists from motor vehicles. Integration means keeping cyclists on the road and is the preferred option, so long as traffic volumes and speeds are reduced enough to ensure all cyclists' safety. If a road cannot be made safe, then cyclists should be separated from the traffic. The UK's Institution of Highways and Transportation use the following prioritised hierarchy of options to determine whether to ***integrate or separate*** cyclists:

1. **Reduce the traffic volumes**: Provide public transport that is faster and more convenient than driving. Convert general traffic lanes to bus/bike lanes or HOV lanes - removing road lanes has been shown to reduce overall traffic volumes. Prioritise the sustainable transport modes of walking, cycling and public transport over motor vehicles in order to encourage commuters out of their cars.

Access for cars is restricted in Cologne, improving the safety of cycling & walking

2. **Reduce the speed of traffic** in residential, employment and retail precincts to 30 or 40 km/h to create safer on-road cycling conditions.
3. **Treat any specific issues, such as pinch points, drainage grates, poor cycling provision or dangerous intersections.** Intersections are where most cycling accidents occur, they can be treated with:
    - Cycle lead-in lanes & handrails
    - Advance stop boxes
    - Hook turns (for right turns at busy intersections)
4. **Provide on-road cycling space:** Such as bus/bike lanes or wide kerbside lanes by; narrowing other traffic lanes, reducing/removing flush medians or removing car parking from one side of the road.
5. **Cycle lanes and off-road cycle/shared paths:** This option should be considered after the less expensive and simpler options above. Cycle lanes should be at least 1.5m wide, with more width for traffic speeds exceeding 50km/h, gradients >3% (add 0.3m) or >8% (add 1m), car parking (add 0.3m), hazardous gutter or drain grate, lateral clearances and high cyclist volumes. Cycle paths (including shared paths) should be at least 1.5m one-way and 2.6m two-way. Entry/exit points and road crossings require special design consideration. Bus/bike lanes should be > 4.2m (avoid 3.2 to 4.2m due to the ambiguity they pose for buses passing cyclists.)



This graph shows how effectively a speed reduction increases the safety for pedestrians and cyclists, as demonstrated in 30 km/h downtown of Copenhagen (below).

Guidelines on Traffic lane widths (where there is no cycle lane provided): For 50 km/h streets, the minimum kerbside lane width should be 4.0 m, on 30 km/h streets the minimum is 3.0 m as cyclists can be expected to claim the lane. **Avoid 3m to 4 m lane widths,** as motorists may be tempted to pass cyclists when it is not safe to do so.

Cycle Network Design: Each proposal for the regional cycling network should be appraised against the five Dutch CROW guidelines, generally regarded as world best-practice:

1. **Coherence** – is the network complete and does it link to all major origins and destinations? To measure this, the number of connected origins and destinations can be calculated on each route.
2. **Directness** – does the network offer as direct a route as possible? To determine this, the 'detour factor' of a route can be calculated. This is the difference between the straight line distance between origin and destination and the actual cycle route distance.

3. **Attractiveness** – does the network make cycling an attractive choice? The surroundings on all of the cycle routes must be assessed against this criterion.

4. **Safety**– does the cycle network maximise safety of cyclists and all road users? The number of accidents involving cyclists is analysed to assess the safety of each route on the network.

5. **Comfort** – does the network allow quick and comfortable cycling? The mental and physical stress resulting from heavy traffic, as well as traffic obstructions on the route must be assessed and addressed.

Cycle parking: We recommend Sheffield bike racks (inverted "U") as per ARTA's guidelines for Cycle Parking. They are strong, help keep the bike stable whilst locking it and do not scratch the bike frame. Ideally bike racks are within 25 m of key destinations, undercover and well lit at night.

Roundabouts: At a minimum, slow the traffic speeds down and provide pedestrian crossings on each arm. Even better, consider the Dutch approach (see photo, right).

Cyclists and pedestrians at roundabouts in Holland have right-of-way on dedicated paths on the outer edge

Every transport project is a cycling project: Ensure a non-motorised user safety audit is carried pre- and post construction. Ask local cyclists for their input.

Concluding comments on 'Provision'…

- Utilise maintenance projects (such as footpath and kerb replacement programmes) to include enhancements for cycling
- Ensure the project aligns to your cycling strategy, the design is safety audited and will be maintained
- Get your staff and consultants along to NZTA's "Fundamentals of Planning and Design for Cycling" course, a one day course which has been the source for much of the information provided above.
- Ask yourself, would you be happy to cycle over this with your family?

Liberal use of pedestrian crossings in Paris encourage more walking and cycling

Additional key areas of provision include:

- Good access (and parking options) for cyclists at public transport stations
- Bike racks on all buses
- Bike stations at key public transport stations

(2) Promotion

Too many Auckland motorists are aggressive drivers and unwilling to "share with care" on our roads. The following promotional activities (coupled with the policy initiatives in the next section) will help to change this:

- Mass media promotion of the "share with care" message (eg: TV, radio, newspapers)
- Access to rental bikes and company bikes
- Provision of free air for bikes at key points around the city
- Recognition and surveys of cyclists to assess their satisfaction and to gather suggestions for improvements
- Cycle training classes for all school children
- Showers at the workplace
- Police on bikes (enhance community connections whilst validating cycling as a key transport mode)

Policeman on bike keeps in touch with the local community in Oldham, England

New cycling infrastructure requires marketing promotion to maximise its use. Travel behaviour change programs and events (such as Family bike days and cycling breakfasts) are regarded as essential tools for growing the number of cyclists.

City bikes complement walking and public transport in Paris and Cologne.

Free air for bikes in Odense, Denmark

(3) Policy

The following policies can significantly help improving motorist's standard of driving and overall cycling conditions:

Motor vehicle regulation to support the "share with care" road culture:

- Hands-free use of mobile phones only (includes the banning of texting)
- Compulsory third party insurance for all motor vehicles
- Mandatory professional training for obtaining a driver's license
- Raising the driving age to 18 years
- Restrict the modification of vehicles to prevent loud exhausts and tinted windows
- Traffic laws that assume motorists to be responsible for a crash with a cyclist and strict enforcement of cyclists' rights by police and courts
- Reduce the speeding tolerance from 10 km/h to 5km/h over the posted speed limit

The introduction of London's Congestion Charge caused an 18% reduction in vehicle traffic and helped double the number of cyclists.

Car parking reduction and Road Pricing: The gradual reduction of cheap car parking in the city centre parking and the implementation of road pricing (such London's congestion charge) will reduce traffic volumes, improving safety for cycling.

Taxation of car ownership and use: Higher taxes on car purchase, annual registration and petrol. High hourly parking rates in downtowns. The extra revenue is raised should be directed into providing enhanced public transport, walking and cycling.

Land-use planning policies should encourage higher density, mixed use neighbourhoods centred on good public transport with excellent walking and cycling connections.

Vehicle limitations in urban areas: Turn restrictions and artificial dead ends are created for cars but not for cyclists. Implement widespread traffic calming and car-free pedestrian zones.

Prioritisation! Unfortunately, many Auckland politicians do not regard cycling as a serious transport mode and so do not give it the resources and priority it deserves. However, enlightened cities around the world are prioritising pedestrians, cyclists and public transport over the single occupancy motor vehicles, in order to encourage commuters out of their cars. Such an approach not only improves transport efficiency, but make Auckland more liveable, attracting skilled and experienced people who contribute to a stronger regional economy.

See over for a summary of the roles and responsibilities of the various transport organisations…

In order to deliver safe and pleasant cycling conditions in Auckland, the following organisations need to be adequately resourced to work with one another on the coordinated implementation of this multi-faceted, mutually reinforcing set of provision, promotion and policy initiatives.

Suggested roles and responsibilities to enable the delivery of safe and pleasant cycling conditions in Auckland	Local Councils	RLTC	ARTA	ARC	NZTA	Police	MoT / Cabinet
PROVISION							
1. Reduce traffic volumes:							
a) Significantly improve public transport, particularly bus lanes & rail	✓	✓	✓		✓		✓
b) Make car travel less convenient within downtown and neighbourhoods	✓						
c) Plan to reduce the amount of traffic and car parking	✓	✓		✓			✓
2. Reduce traffic speeds							
a) 30km/h streets for neighbourhoods, town centres and schools	✓				✓		
b) Reduce the tolerance for speeding to 5 km/h						✓	
3. Supplementary measures							
a) Develop the regional cycle network	✓	✓	✓		✓		
b) Bike racks on all buses			✓		✓		
c) Provide 'Bike Stations' at key transport destinations	✓		✓				
d) All transport projects get a Non-motorised User safety audit	✓		✓		✓		
e) Treat all intersections and hazards to ensure safe cycling	✓				✓		
PROMOTION							
a) Create a 'share with care' culture on our roads	✓		✓		✓	✓	
b) Rental bikes provided in town centres and at key transport nodes	✓		✓				
c) Reward cyclists with promotions and survey their requirements	✓		✓				
POLICY							
a) Compulsory hands-free use of mobiles & 3rd party vehicle insurance					✓		✓
b) Higher taxes on vehicle purchase & use. Restrict vehicle modifications					✓		✓
c) Land use and transport policies to support 'smart growth'	✓	✓	✓	✓	✓		
d) Motorists assumed by law to be responsible for crashes with cyclists					✓		✓
e) Mandatory professional driver training & raise the driving age to 18					✓		✓