

# Cycling Network Guidance

*The evolution of best practice*



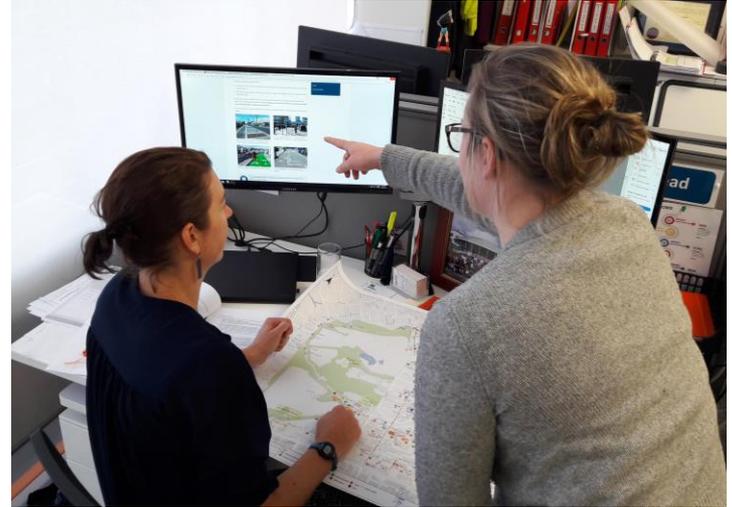
## *What we will cover today*

- Cycling Network Guidance (CNG) and its content
- What is being added to the CNG to reflect evolving best-practice
- Several New Zealand urban cycling case studies developed for the CNG



# What is the Cycling Network Guidance - CNG?

- New Zealand Transport Agency initiated project to aid the delivery of **best-practice** facilities of a consistent quality nationwide
- A web-based collection of planning guidance, design tools, case studies and links to other guides
- Launched in June 2016 after about one year of preparation



<https://www.nzta.govt.nz/walking-cycling-and-public-transport/cycling/cycling-network-guidance/>

# CNG overview



## Planning and design:

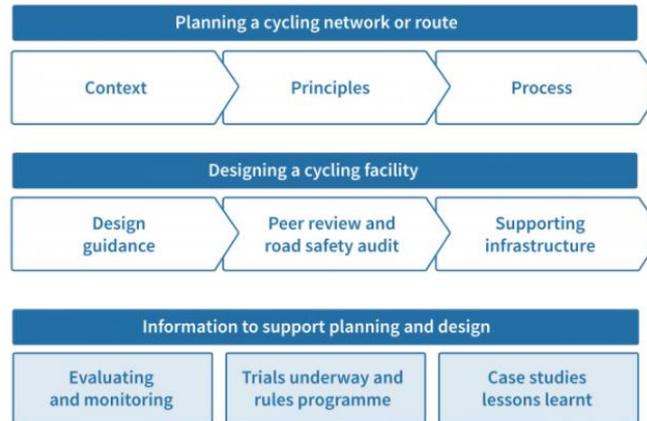
- Recognises that sometimes they need to overlap

### Cycling network guidance – planning and design

What provision should be made for people cycling within our transport network, and where?

Cycling Network Guidance – planning and design (CNG) aims to promote a consistent, best-practice approach to cycling network and route planning throughout New Zealand. It sets out a principles-based process for deciding what cycling provision is desirable, and provides best-practice guidance for the design of cycleways.

The figure below provides an overview of the [CNG's](#) content.



Overall the guidance provides the essential ingredients of good planning and design but also encourages innovation!

# CNG content

## Planning content from:

- The Cycle Network and Route Planning Guide (CNRPG)
- Plus updated to reflect aspects such as ‘target audience’
- Updated to reflect new processes such as Business Cases

Home › Walking, cycling and public transport › Cycling › CNG home ›

## Planning a cycling network

CNG home Site map **Planning a cycling network** Designing a cycling facility More ▾



[CNG Home](#) | [Site map](#) | [Planning](#) | [Designing](#) | [Evaluating and monitoring](#) | [Trials](#) | [Case studies](#)

This part of the CNG provides users with best practice guidance, either directly or through links to appropriate sources for all stages of planning a cycle network.

The figure below shows the broad planning process including how it overlaps with the concept [design](#) process since it is generally an iterative process. For example, on a particular route, a facility type that meets the needs of the chosen target audience may not be feasible. This can only be determined by looking at the space available and how much space the facility may require, therefore a concept design process is undertaken. Also, the concept design may be altered due to the consultation that occurs in the planning phase. Following the planning process the concept design is progressed to detailed design.



### Context

[The planning and policy context](#)

### Principles

**CNG home**

[Site map](#)

**Planning a cycling network**

- [The planning and policy context](#)
- [Principles](#)
- [Process](#)
- [References](#)
- [Glossary of terms](#)
- [Acknowledgements](#)

**Designing a cycling facility**

- [Between intersections](#)
- [Intersections](#)
- [Crossings](#)
- [Peer review and audits](#)
- [Supporting infrastructure](#)
- [Evaluating and monitoring](#)
- [Trials underway and rules programme](#)
- [Case studies](#)

# CNG content

## Design content from:

- Local NZ guides
- MOTSAM, TCD Manual
- Austroads & other Australian guides
- CROW, NACTO etc..
- Developed specifically
  - E.g. Separated cycleways (1-way or 2-way tool, crossing at side roads)

The screenshot shows the website interface for 'Designing a cycling facility'. At the top, there is a breadcrumb trail: Home > Walking, cycling and public transport > Cycling > CNG home >. Below this is the main title 'Designing a cycling facility' in a large white font on a dark blue background. A navigation bar below the title contains links: CNG home, Site map, Planning a cycling network, Designing a cycling facility (highlighted), and Evaluating and monitoring. Below the navigation bar, there are two sub-links: Trials underway and rules programme and Case studies. The main content area features a photograph of a green-painted bicycle lane with white markings. Below the photo is a breadcrumb trail: CNG Home | Site map | Planning | Designing | Evaluating and monitoring | Trials | Case studies. The main text explains that this part of the CNG provides best practice guidance for all stages of design, from concept to detailed design. A process flow diagram shows five stages: Planning (highlighted), Concept/Scheme Design, Peer review and safety audit, Detailed design, and Peer review and safety audit. Below the diagram, the text states that the following topics are covered in the CNG for the design of facilities between intersections, and at intersections and crossings: design guidance (for concept/scheme and detailed design), peer review and road safety audit (all stages), and supporting infrastructure (such as way finding and cycle parking). The text further explains that the design process should involve a multi-disciplinary approach and that the NZ Transport Agency has well-developed guidance in this space. On the right side of the page, there is a dark blue sidebar with a table of contents. The 'CNG home' section includes links for Site map, Planning a cycling network, The planning and policy context, Principles, Process, References, Glossary of terms, and Acknowledgements. The 'Designing a cycling facility' section includes links for Between intersections, Intersections, Crossings, Peer review and audits, Supporting infrastructure, Evaluating and monitoring, Trials underway and rules programme, and Case studies.

# Other CNG content to support planning and design

- Supporting infrastructure
- Reviews and audits
- Evaluating and monitoring
- Trials underway & rules programme
- Case studies

## ✓ Beach Road (bi-directional) separated cycleway, Auckland

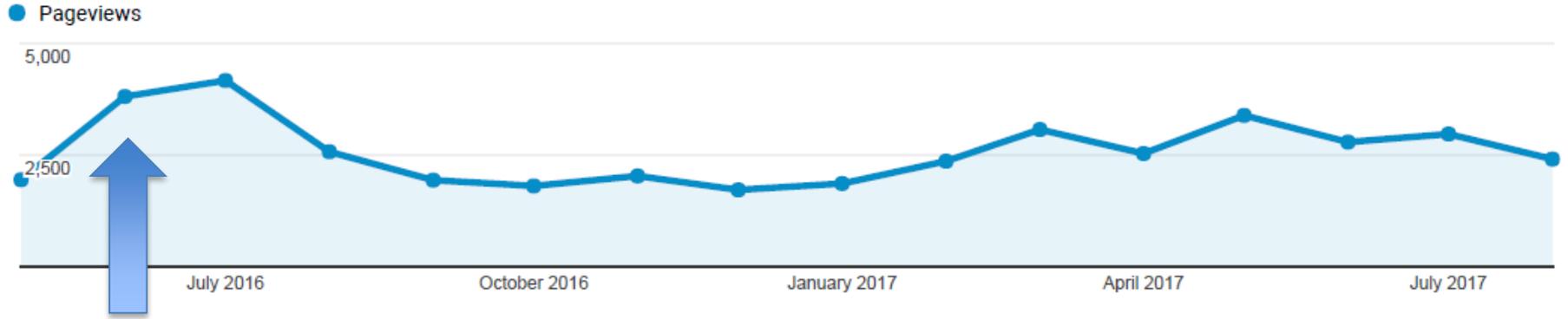
A bi-directional (two-way) separated cycleway<sup>12</sup> was installed on Beach Road in central Auckland in 2014/2015. The facility consists of a two-way 3m wide cycleway which is physically separated from general traffic by raised kerbs. The upgrade also included changes to intersections and landscaping.

A conference paper titled [Delivering Auckland City Centre's First On Road Segregated Cycleway<sup>12</sup>](#) outlines the design features and key challenges encountered during detailed design of this project.



Beach Road protected cycleway, Auckland (photo: Jeanette Ward)

# CNG pageviews over 12 months



The launch in June 2016

# What is best-practice?

.....”a procedure that has been shown by research and experience to produce optimal results and that is established or proposed as a standard suitable for widespread adoption”

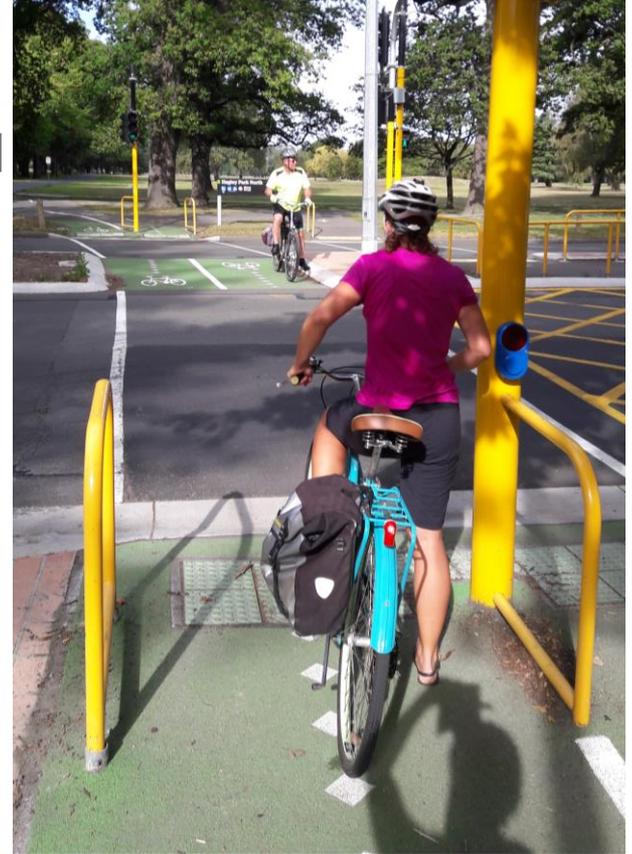
<https://www.merriam-webster.com/dictionary>



## *Evolving best-practice in NZ*

Best-practice is evolving quickly in New Zealand due to:

- unprecedented levels of funding broadening the range of facility types that are affordable
- significant upskilling of design teams
- greater understanding of which designs from overseas lead to the best outcomes
- amendments to land transport rules which enable a broader range of designs.



## *New content being developed – a sample*

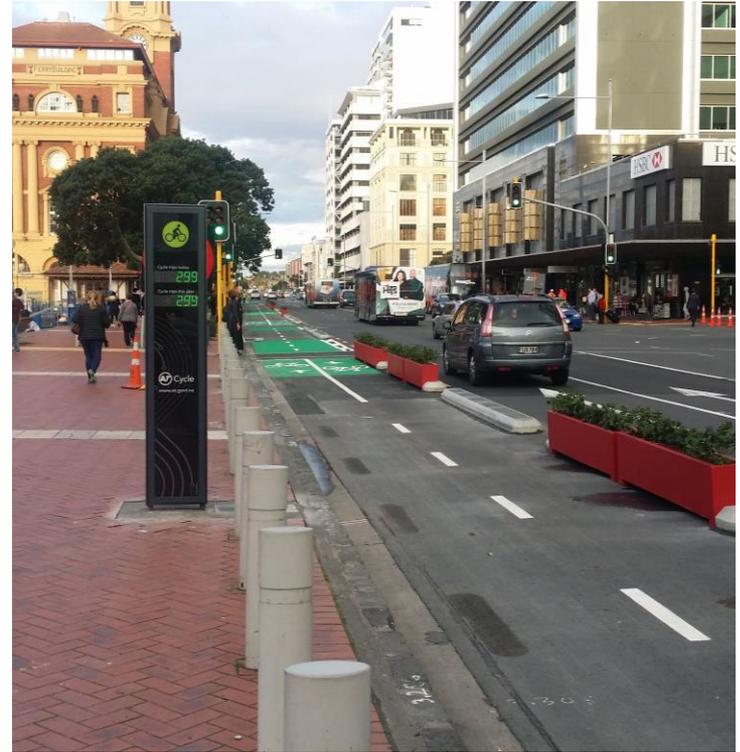
Technical content	Trials and case studies
Separated cycleways – at traffic signals	2 minus 1 lane trial
Separated cycleways – at bus stops	Minimum passing gap research
Separated cycleways – separator types	Motorist-cyclist conflict at driveways
Contra-flow cycle lanes/shared space	Dominion Road parallel greenways
Neighbourhood greenways	SH2/58 interchange, Wellington
Cycle path end treatments	Carlton Gore Road, Auckland
Hook turn sign, buffered cycle lanes and much more....	Morley Street, Rotorua and many more.....

# Recent case studies – Quay Street, Auckland

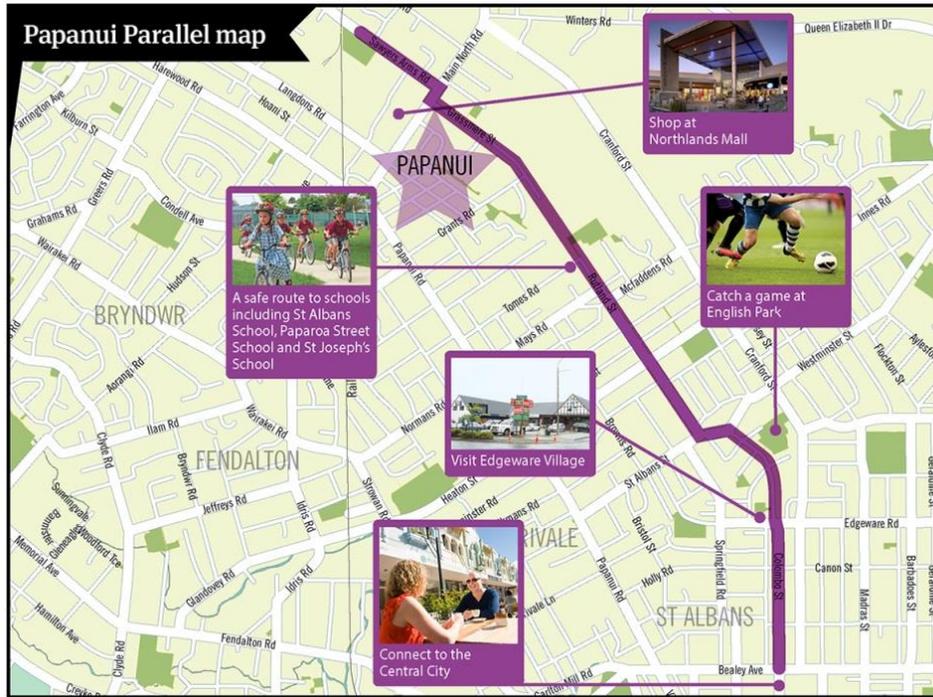


## Recent case studies – Quay Street, Auckland

- Two-way facility
- Planter box separator
- Managing safety at high volume driveways
- Potential conflict between cyclists and pedestrians at crossings
- Inground detection and vertical counter pillar



# Recent case studies – Papanui Parallel, Christchurch



## *Recent case studies – Papanui Parallel, Christchurch*

- Loss of parking
- Safety at driveways, particularly in the two-way section
- Potential conflict between cyclists and bus passengers
- Wheelie bins in the cycleway
- Removal of trees
- Closure of Hawkesbury Ave



## *We want to hear from you!*

To continue enhancing the CNG we need your help:

- Are you, or have you undertaken a trial of something different or innovative, even if informal?
- Do you have a project that would make a good case study that others would benefit from hearing about?

We can help you prepare the content!!

Talk to us or email: [cycledesign@nzta.govt.nz](mailto:cycledesign@nzta.govt.nz)

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