

CYCLEWAYS AND SAFETY

ARA PAIHIKARA ME HAUMARU



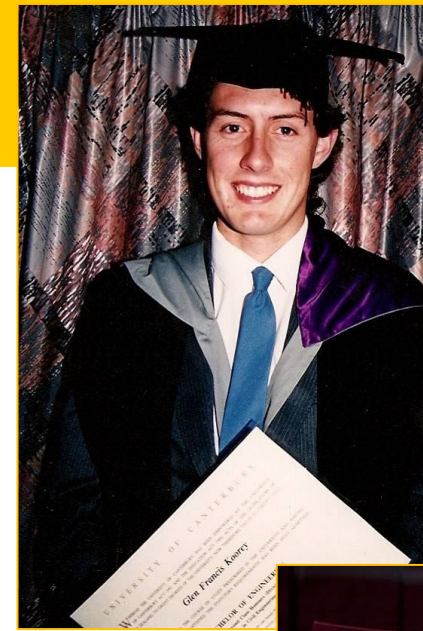
Dr Glen Koorey
Nerd Nite Selwyn, Sep 2024

About me...

- BE(Hons), BSc, PhD, FEngNZ
- Opus International (1994-2004)
- University of Canterbury (2004-16)
- ViaStrada Ltd (2016-)

Other affiliations/interests:

- *Transportation Group NZ National Cm'tee*
- *Cycling/Walking/Safety advocacy/media*
- *Greater Ōtautahi Urbanists*





My Consulting...



Fix roads or lower speed limits?

The Slowdown
A Herald data series on the drive to lower NZ speed limits

Experts say safety fixes not either/or; they're complicated

Julia Gabel

Opponents of proposed speed limit reductions say Waka Kotahi NZ Transport Agency needs to focus on fixing road issues rather than slowing motorists down to make the roads safer.

However, road experts say it's not that simple and reducing speed limits is a quick and low-cost way of immediately improving road safety.

In this final part of The Slowdown, Waka Kotahi's proposed speed limit changes, the Herald examines the arguments for and against fixing our roads, rather than lowering the speed limit.

"In my opinion, it's not a matter of either/or," said John de Port, director of engineering at Terra, an independent research organisation that specialises in transport-related issues.

De Port, who has been a transport researcher for 35 years, says Waka Kotahi has a finite budget because it is funded by road-user charges and fuel excise duty.

If upgrading the road network was to increase in pace, road users would in turn need to accept a substantial increase in road user charges and fuel tax or other specific Government funding.

"Thus, improving road quality is happening, but is necessarily relatively slow."

New Zealand's road deaths are disproportionately high, with a death rate in 2018 of 77 per 100,000 people.

To address this, the Government launched the Road to Zero strategy in 2019 with an initial target of 40 per cent fewer deaths and serious injuries on the road by 2030, and eventually no deaths or serious injuries on the road at all.

Reducing speed limits is considered crucial to achieving these goals.

However, documents received by RNZ under the Official Information Act showed that in November 2020, officials advised ministers this initial 40 per cent target was unrealistic.

Gen Koorey, transport engineer of the road, crash survivability and community wellbeing.

It's silly to say [all roads] are safe at 100km or 50km, they're not. They will kill people.

limit to the current condition of the road could be done immediately at a relatively low cost and the limit could be increased over time as sections of the road were upgraded.

"Upgrading the road quality is a relatively low-cost and the limit could be increased over time as sections of the road were upgraded."

Police say speed, alcohol, drugs, and distraction are the main causes of crashes resulting in deaths and serious injuries. But, regardless of the main cause of a serious crash, speed is always a factor to some degree.

New Zealand has traditionally had a bit safer to travel on. The most significant level of those upgrades are median barriers in particular.

Thomson said.

We don't want to end up with it just being Auckland to Hamilton and around Wellington and Christchurch, that are the only places that have roads above 80km per hour.

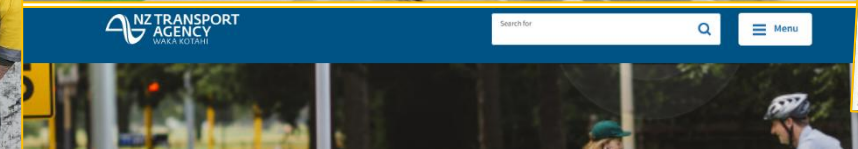
Transporting NZ chief executive Nick Leggett said road quality was a problem and reducing speed limits at 100km or 50km, they're not. They will kill people.

The latest legislation for setting speed limits, the Land Transport Rule: Setting of Speed Limits 2022, which came into effect in May, was more nuanced and wide-ranging than previous legislation, Koorey said.

"It reflected that not all roads are equal, not every rural road looks the same, not every urban street looks the same."

Koorey said in some cases lowering the speed limit had to make up for poor road design because there was not enough money to fix every road in New Zealand or to build safety infrastructure like median barriers.

Waka Kotahi Road to Zero port.



Diagonal diverter e.g. Prevent traffic from travelling straight through an intersection	
Change of intersection priorities (possibly through intersection realignment) e.g. Assign different priority route for traffic	
Intersection traffic calming e.g. using devices such as mini-roundabouts, platforms, and thresholds to slow traffic travelling through an intersection	

Cycling network guidance

Home • Walking, cycling and public transport • Cycling • Cycling standards and guidance •

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

Evaluating and monitoring
Trials underway and rules changes
Case studies
What's new
Guidance notes and tools

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 cycling network and route planning throughout New Zealand. It sets out a principles-based process for 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.

Planning a cycling network or route

Context Principles Process

Designing a cycling facility

Design Peer review and Supporting



My Teaching/Training & Research...



I've Cycled around a bit...



Cycling Safety in 2010

Third Morrinsville cyclist dies in hospital

November 18, 2010, 7:43 am

18 November 2010

Friends grieve for 'wonderful' nurse

Cyclist killed in crash

2 comments | Post Comment

MON, 15

The cyclist
mother-of-
race.

Patricia /
Palmerst
best frien
near Mor
in the sa

They we
which w

Mrs Fra
aged fro

"Her fan
space a
commu

The cau

Schoolgirl hit amid cycle death spate

Last updated 10:50 18/11/2010

549 comments

Text Size

Print

Share



DEREK FLYNN

INJURY: A school girl was seriously injured after falling under the rear wheels of a truck and trailer unit south of Blenheim on State Highway 1.

A Blenheim schoolgirl was **seriously injured when she was run over by a truck** while cycling this morning, as the cycling death toll in the past five days rose to five.

The cycling deaths have seen the Cycling Advocates Network renewing calls for drivers to undergo testing every 10 years.

The 12-year-old girl was riding with another girl when she was hit by the truck and trailer, which was carrying a tractor, on State Highway 1 just outside Blenheim about 8.20am.

Blenheim St John Ambulance operations team leader Pete Davidson said the girl suffered serious head, chest and abdomen injuries and was taken to Wairau Hospital.

FIFTH CYCLE DEATH SINCE SUNDAY

Kay Wolfe, the third cyclist hit by a car near Morrinsville on Sunday has died in Waikato Hospital.

Wolfe, 45, of Gordonton, had been one of 10 cyclists from the Morrinsville Wheelers Cycling Club travelling in a group along the Morrinsville-Walton Rd when a car driven by a 23-year-old woman crossed the centreline on a corner and crashed into the group.

land's
on a
yesterday
and
ates at an

East

ed to
ed and
in the

ourth of
Zealand this week.

door was at home with family yesterday but
agedy.

his wife told the *Herald*.

Med on Albert St since March, when she is
working holiday in New Zealand.

ed a notice in their window, saying: "Please
or lovely nurse Jane was fatally injured in an
g her loss."



Jane Bishop died on a stretch of Tamaki Drive which a triathlete who often travels on it says is particularly dangerous for cyclists because it is narrow and has a tight corner. Photo / Greg Bowker



VIDEO John Key on cycling deaths (1:28)

- Waterfront cyclist killed in crash named
- Driver forces cyclist off road - lectures him
- Auckland cyclist killed trying to avoid opening door - police
- Spontaneous photo stop ends in tragedy

nzh your views

What needs to be done to make cycling safer?

Share your view »

• Read what others think

NZ Coroner's Inquest Into Cycle Deaths (2011-13)

...which recommended a National Expert Cycle Safety Panel (2014)



- Some wins...
 - More funding
 - Industry guidelines
 - Cycle skills training



Is Cycling Unsafe?

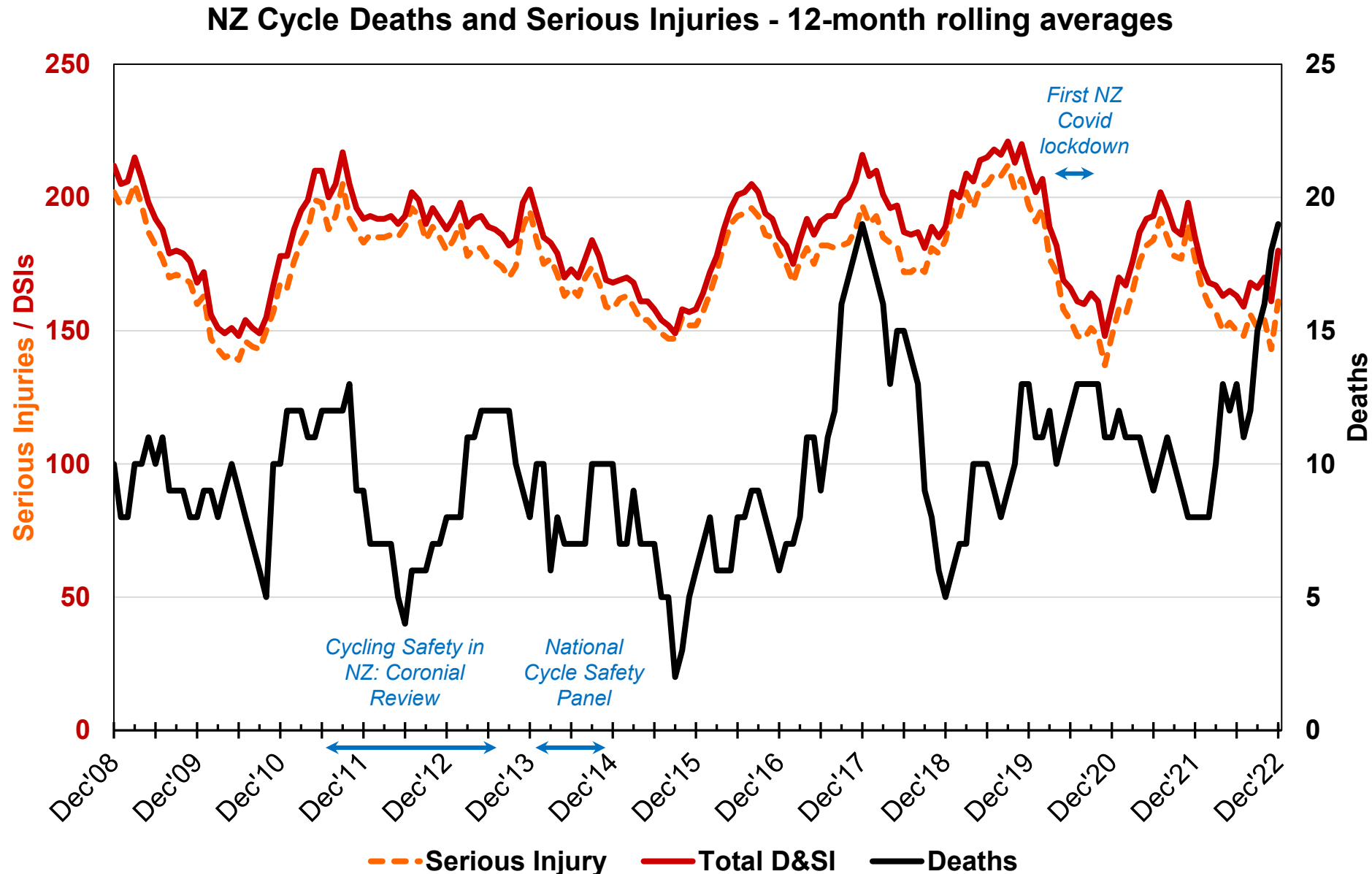
- **Perceived Risk** influenced by:
 - Regular Negative Media
 - Lack of Familiarity with Cycling by many
 - Can't Control Behaviour of Other Road Users
 - Immediacy of Injury/Death
- **Actual Calculated Risks in NZ:**
 - 1 Cycling Death per **2 million hrs** cycled
 - 1 Serious Injury for every **10,000 hrs** cycled
 - **Health** benefits of cycling outweigh risks **10:1**



"Really, you must have a screw loose to want to ride a bike on today's roads, you just don't know what nutter is behind the wheel."

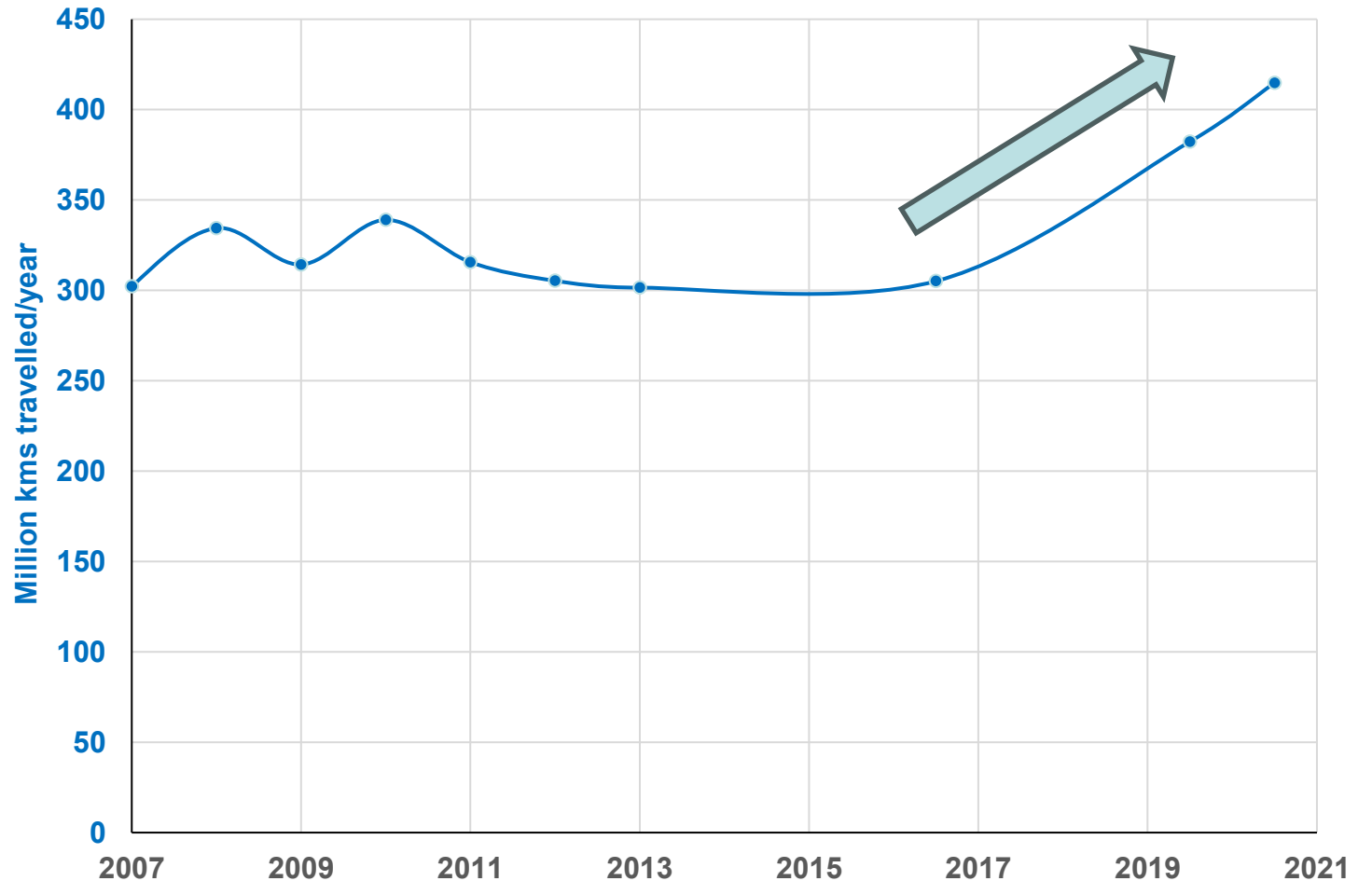
So what's happened with cycle safety lately?

- No dramatic improvements
- Notable drop during national lockdown though (2020)
 - Effect of less traffic?



Is individual risk improving though?

- MoT Household Travel Survey data
 - Ongoing monitoring, scaled from a sample of travel diaries
- ~**35%** increase in cycling travel across NZ since 2016
 - Aligned with major cycleway funding increases



➔ *Static cycle safety stats + more cycling = safer cycling **per person**?*

“AAA” Routes: for All Ages & Abilities



www.8-80cities.org



This Means Either...

SEPARATION



- At Intersections
- Along Roads

Vancouver, Canada

...Or...

INTEGRATION

with

SLOW...

...LOW...

...or NO Traffic



Vancouver, Canada

Lower Speed Limits



Wellington



Hamilton

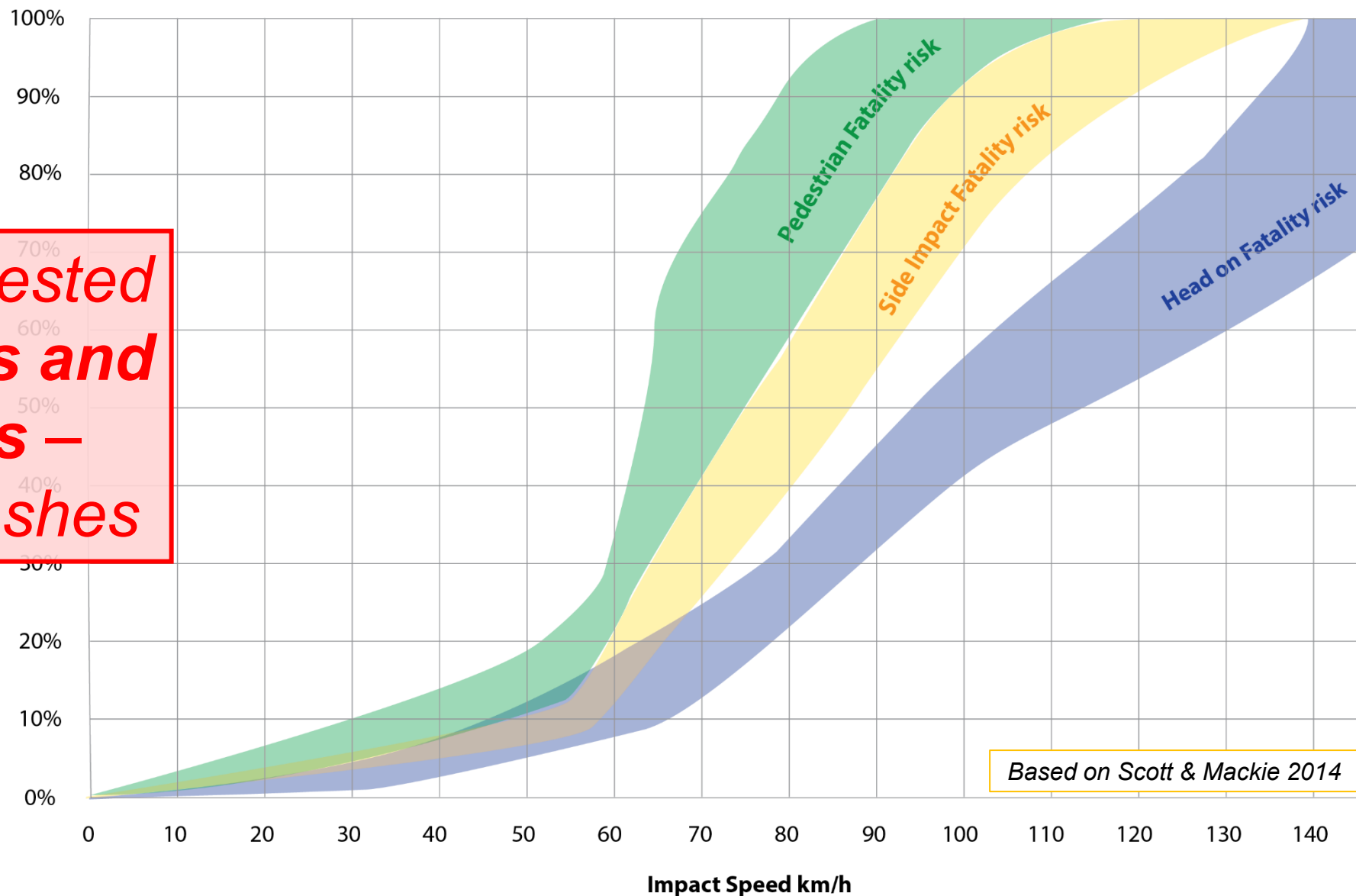


Christchurch

Speed always affects the CONSEQUENCES

(it affects the likelihood too)

*We are more interested in reducing **deaths and serious injuries** – NOT reducing crashes*



Neighbourhood Greenways



**aka: “Bike Boulevards” or
“Local Street Bikeways” or
“Quietways”, etc**



Low Speeds and Volumes



Christchurch, NZ

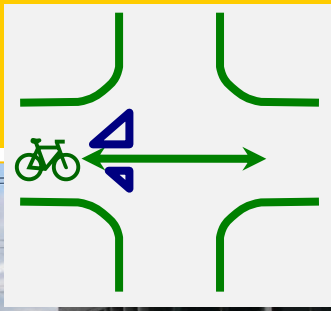


Portland OR, USA

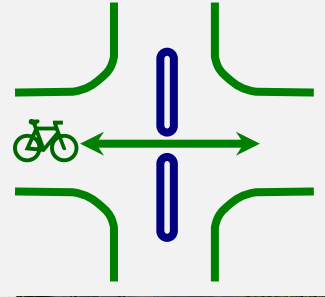


Freiburg, Germany

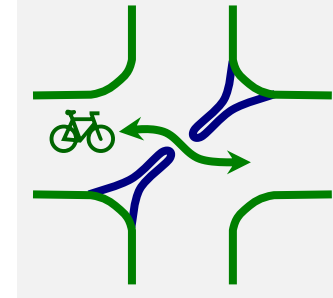
Traffic Restrictions & Bike Bypasses



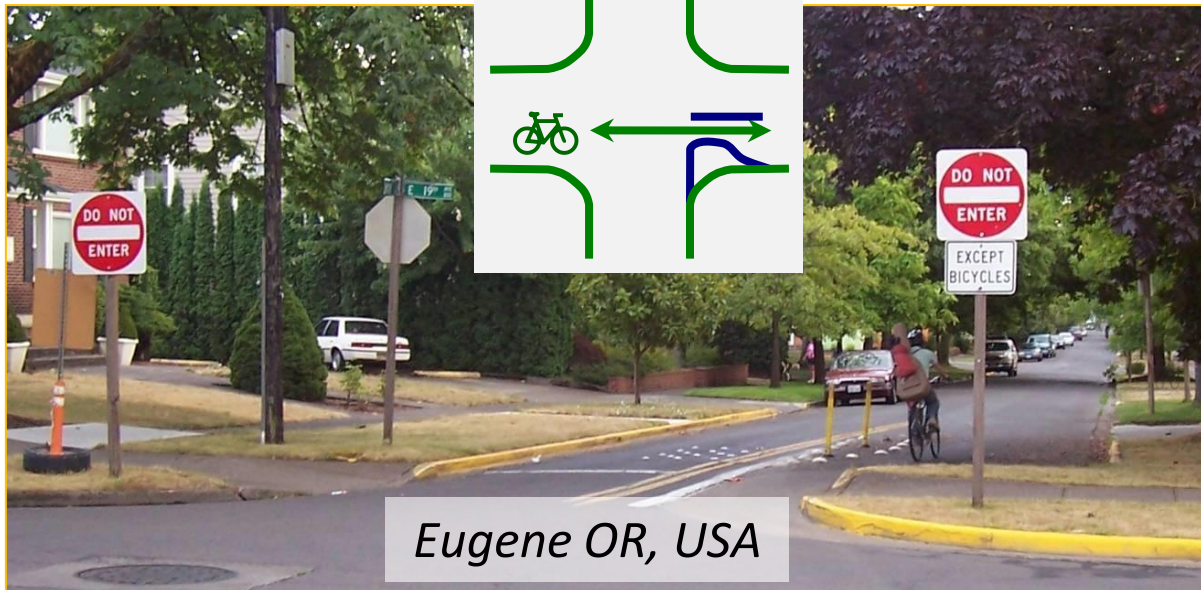
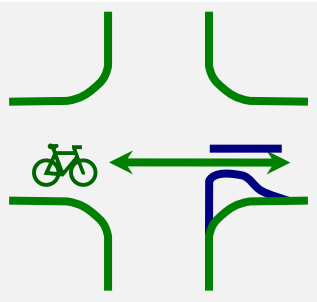
Christchurch, NZ



Vancouver, Canada



Vancouver, Canada

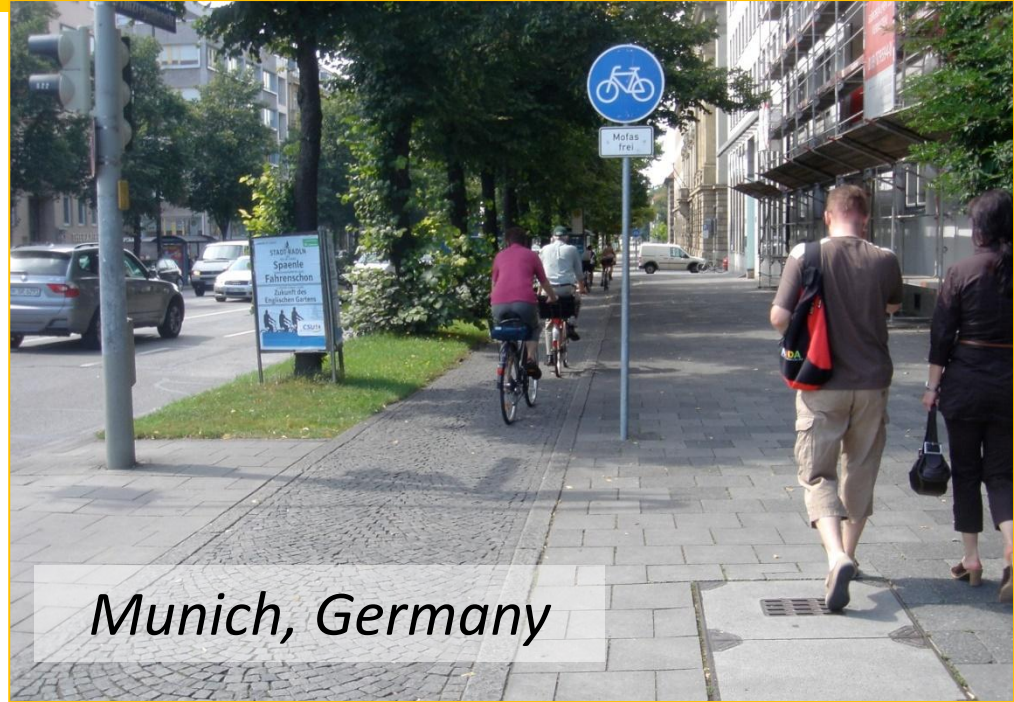


Eugene OR, USA

Separated Bikeways



Copenhagen, Denmark



Munich, Germany



Vancouver, Canada



Melbourne, Australia

How to Separate

- Concrete Islands
 - Small raised Delineators
 - Raised Kerbs
 - Grass Berms
 - Vertical Posts
 - Parked Cars
 - Planter Boxes
 - Painted Hatching
- Or a combination...*



Beach Rd, Auckland

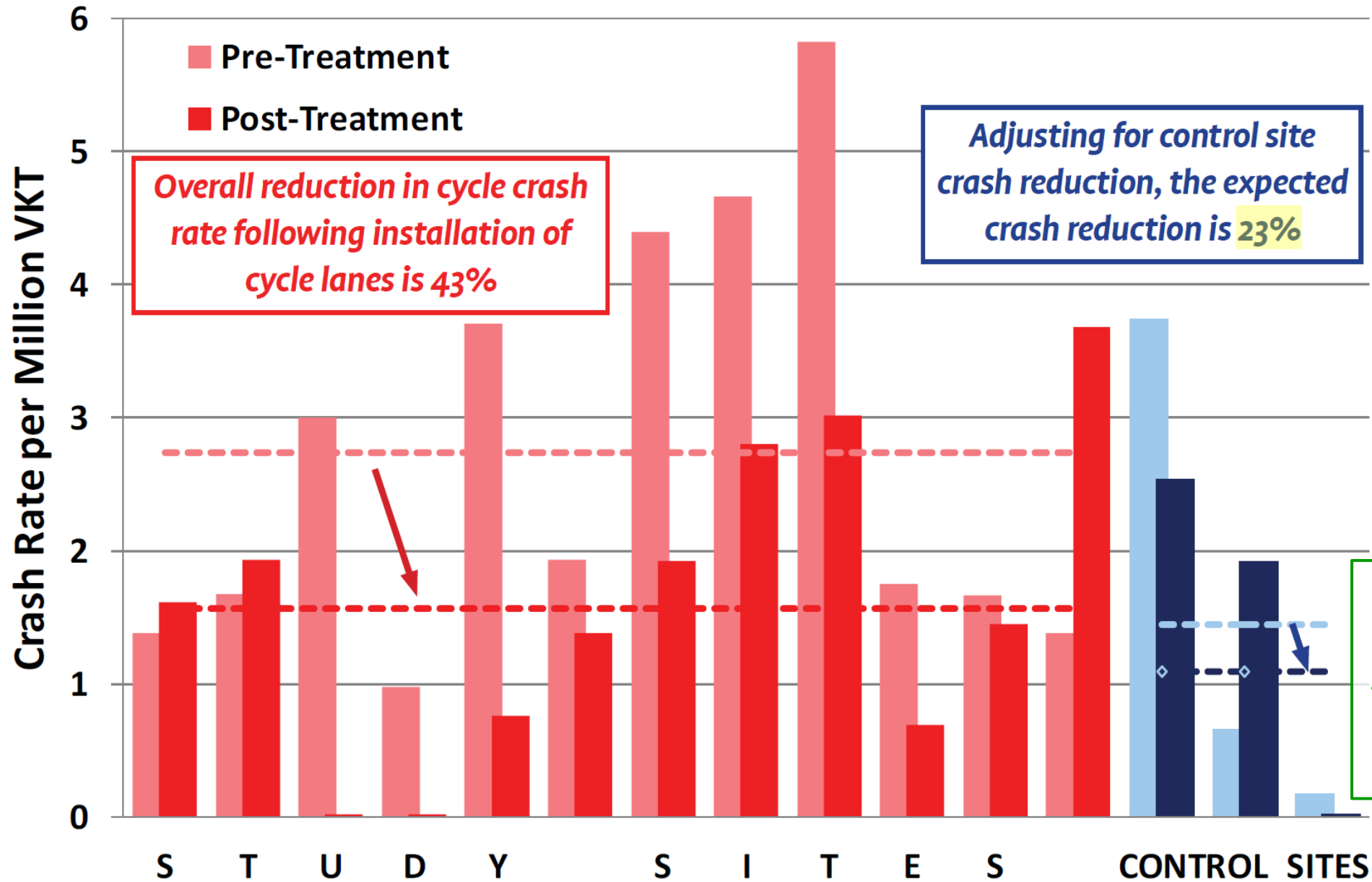


Ferry Rd, Christchurch

For Quick Builds, use a “**PPP**” Approach...



Ordinary Cycle Lanes are Safer Too!



Parsons J., Koorey G. (2016),
"The Effect of Cycle Lanes on
Cycle Numbers and Safety",
Transportation Research Board
Annual Meeting, Washington
DC, 10-14 Jan 2016

To wrap up...

- Cycling safety stats in NZ are relatively static
 - But that risk is actually pretty small...
 - And cycling growth is probably improving the personal risk
- Still need to implement a number of Cycle Safety Panel recc's
 - Especially related to truck safety (1/3 of fatality problem)
- Introduce more **safe-system measures** for more cycling
 - Lower traffic speeds & volumes
 - Protected/separated cycle facilities
 - Controlled intersections and crossings

(But even painted cycle lanes improve cycle safety...)

Ngā Mihi!

Thank You!

Pātai?

Any Questions?

✉ glen@viastrada.nz

[in](#) /glenkoorey/

[Twitter](#) GKoorey



Copenhagen, Denmark