

Directional Cycle Signals – update

Presentation to
SNUG 2021 Workshop Queenstown

ViaStrada Ltd

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Megan Gregory presentation (2018)



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SNUG Workshop, Hamilton

Follow up on Megan's 2018 presentation on directional cycle signals

Outline – directional cycle signals

- Megan presented on the topic in 2018
 - Prior to the trial finishing
 - Quick recap
- Trial status
 - Can we now implement directional signals?
- Observational thoughts
 - Some things don't work as well as they should
 - Stupid users or suboptimal design?



I will cover three things in this presentation:

2018: Device trialled

- Aspects 200 mm and 300 mm diameter
- Cycle symbols and arrows lines 5 mm or 7.5 mm thick
- LED lanterns
- Coloured lens
- Options for arrow orientation



LEFT ARROW



STRAIGHT AHEAD
ARROW



RIGHT ARROW



BEAR LEFT
ARROW



BEAR RIGHT
ARROW

Here's what we decided to trial in NZ

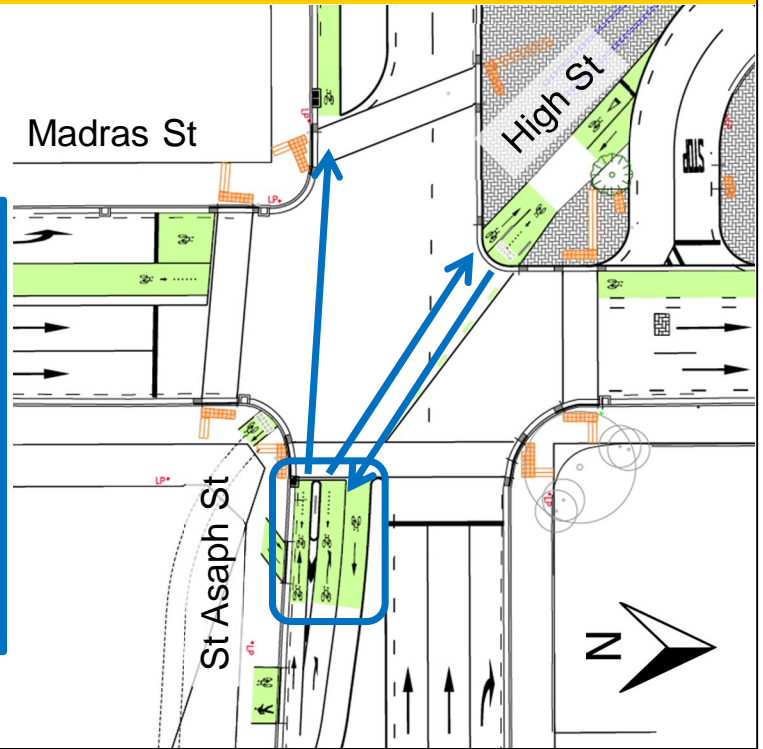
Through trial and error, we found that we have to be careful the hardware achieves a clear image.

Various arrow directions

Intention was to mount signals so cyclists could see them.

(if anybody asks, it's the lantern, the mask, and the diffuser)

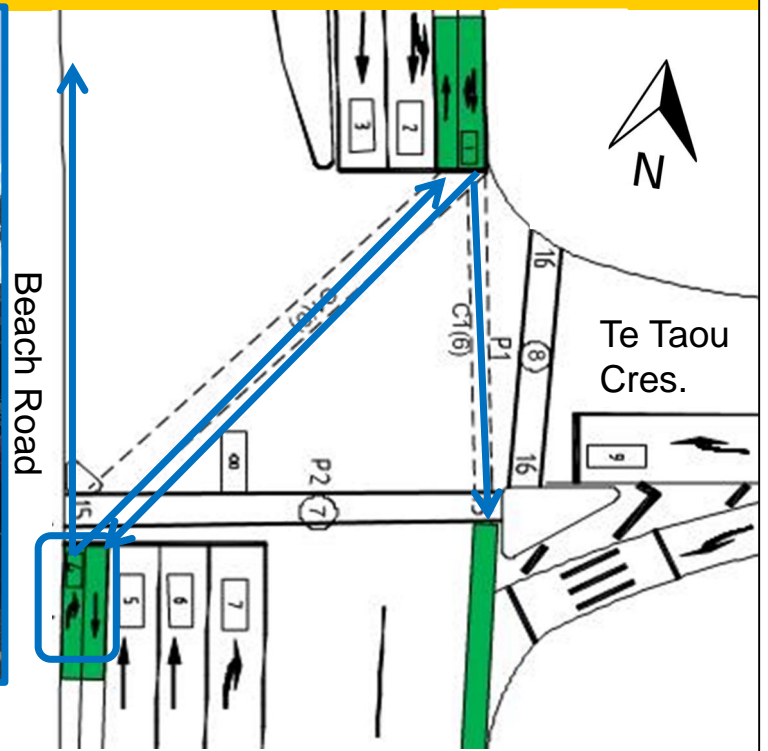
Trial site 1: High / Madras / St Asaph, Christchurch



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1. Chch - Already had through mvmt along cycleway, wanted to introduce diagonal crossing without disadvantaging through mvmt.

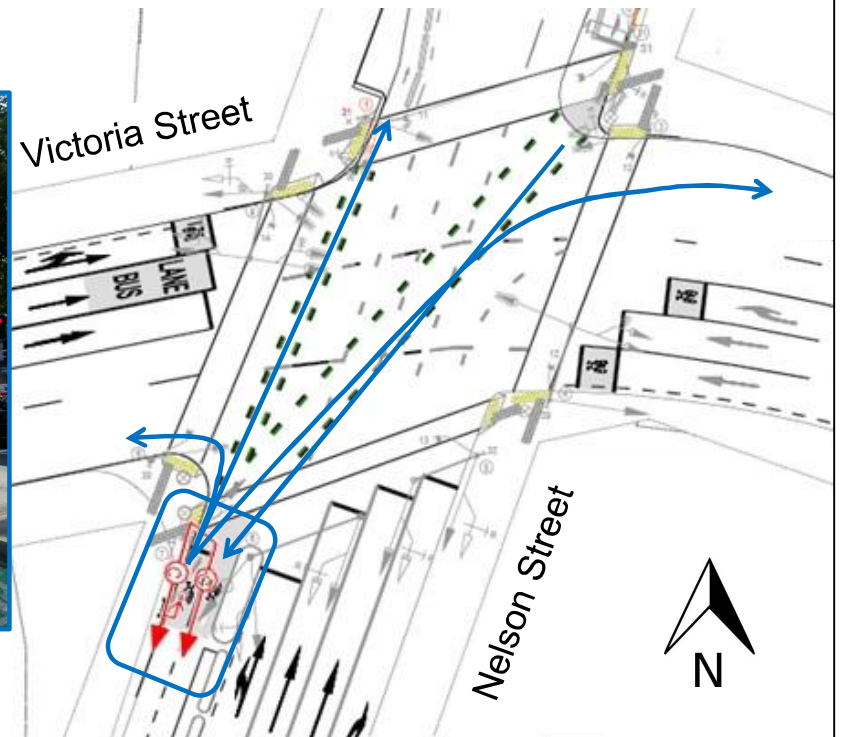
Trial site 2: Beach / Te Taou, Auckland



2. Akld example – two-way protected cycleway switches sides across this intersection

Also explain pre-DCS situation

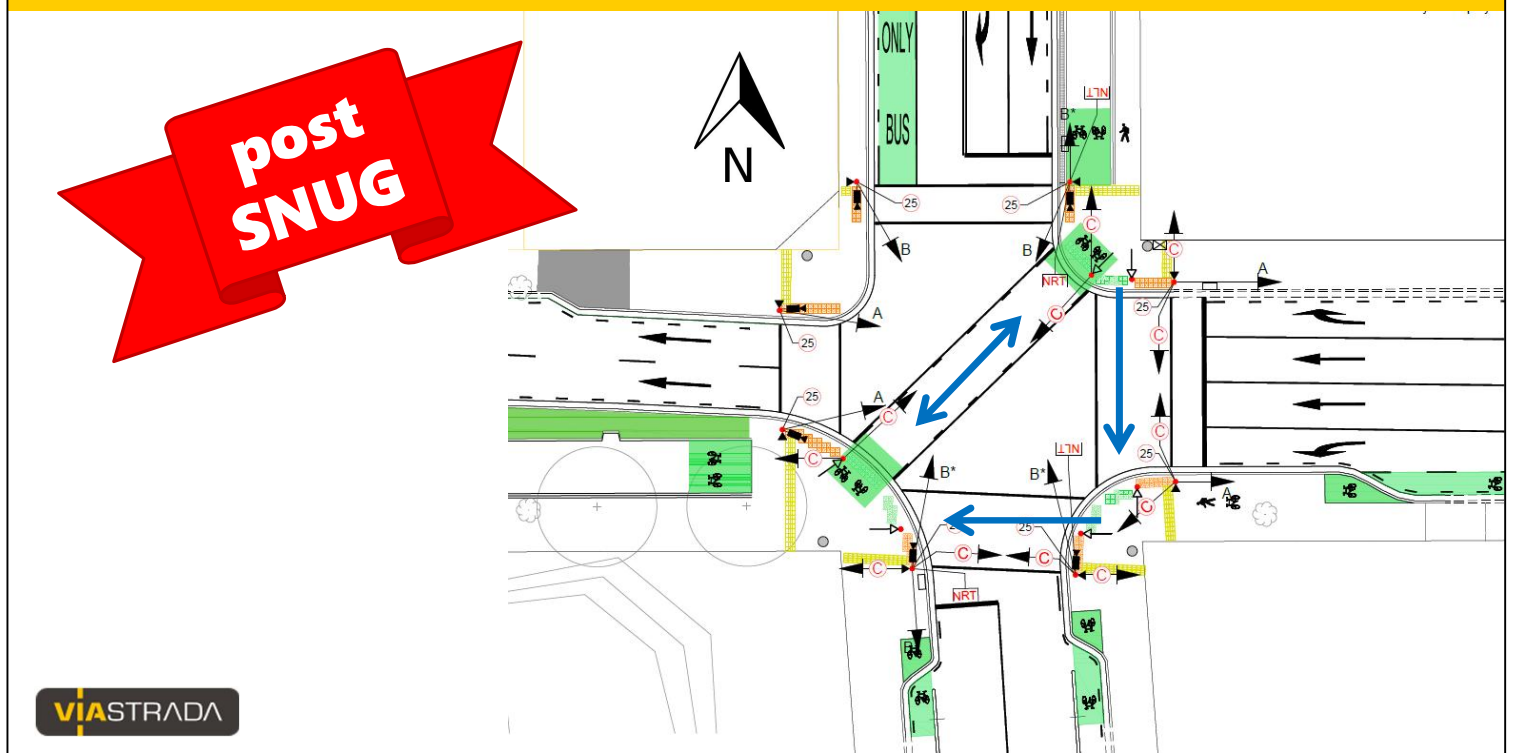
Trial site 3: Nelson / Victoria, Auckland



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3. Auckland – single-directional cycleways north of intersection swaps to a two-way facility on the south side; also accommodate RT from the south approach

Trial site 4: Antigua / St Asaph, Christchurch



4. Second Chch trial site became operational in late 2018 after that year's SNUG conference. This has cycleways going in every direction with a mixture of two-way and one-way facilities. I'll discuss this site in more detail.

2018 presentation

- Conclusions – trial was a success
 - Improved LOS to cyclists
 - Improved compliance
 - Good level of user understanding
- Recommendations
 - List of design details that could be improved



Part 2: trial status

- Final trial report submitted September 2019
- Recommended that
 - the four sites will remain operational
 - TCD Rule be amended to include directional cycle signals
 - RUR be amended to define what users can and can't do
- Cannot add further sites until rules updated



Rule amendments

- Responsibilities
 - TCD (Traffic Control Devices) Rule – Waka Kotahi
 - RUR (Road User Rule) – Ministry of Transport
 - Rule amendments drafted by WK staff
- RUR amendments needed
 - Green cycle signal (no arrow)
 - make analogous to full green signal
 - Directional cycle signal
 - make analogous to arrow signals
 - ensure that both diagonal crossing and right turn are allowed for



Trial undertaken working closely with Waka Kotahi staff; them implementing TCD Rule changes is standard work

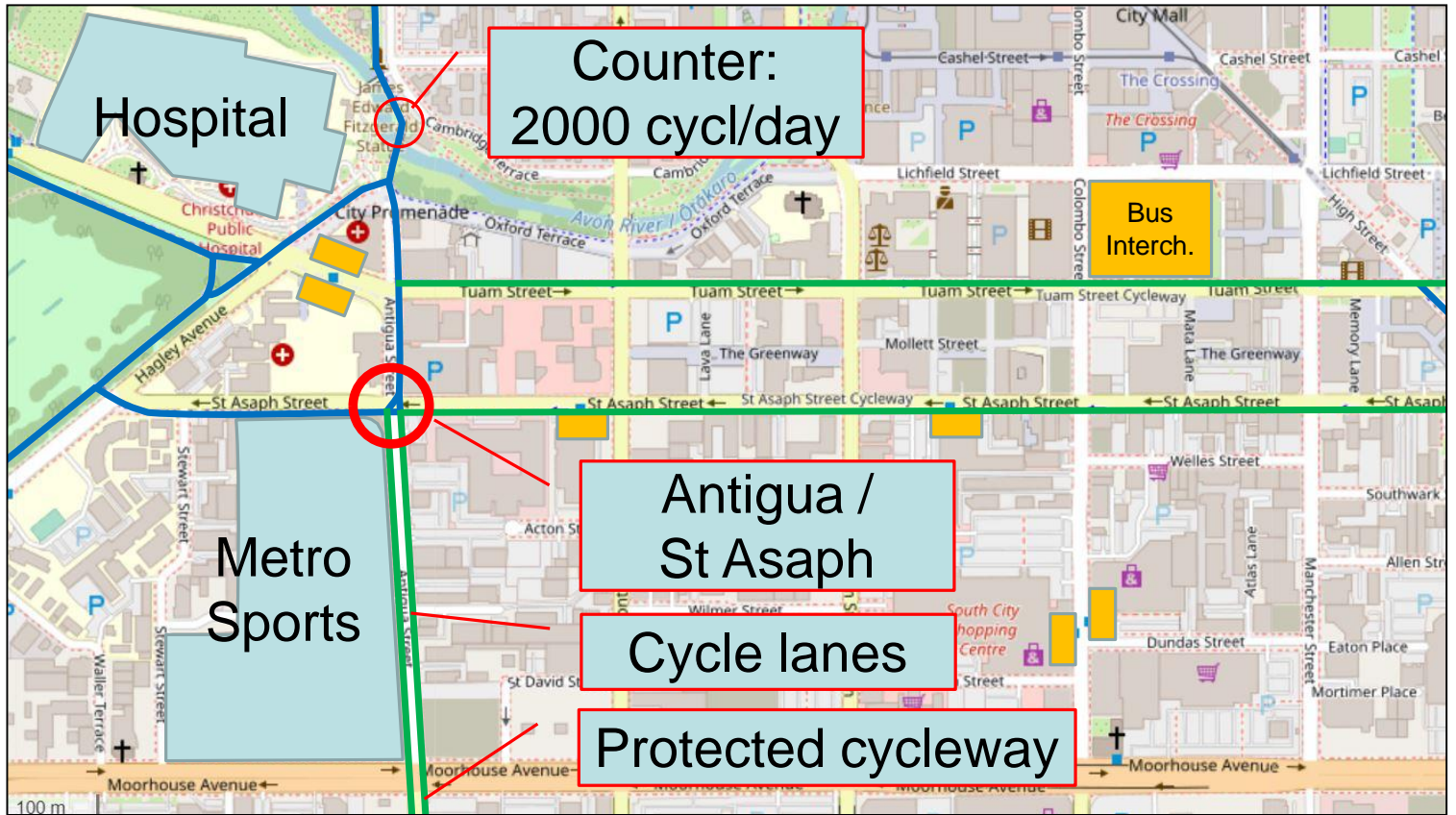
No interaction with Min of Transp staff

Part 3: some reflections

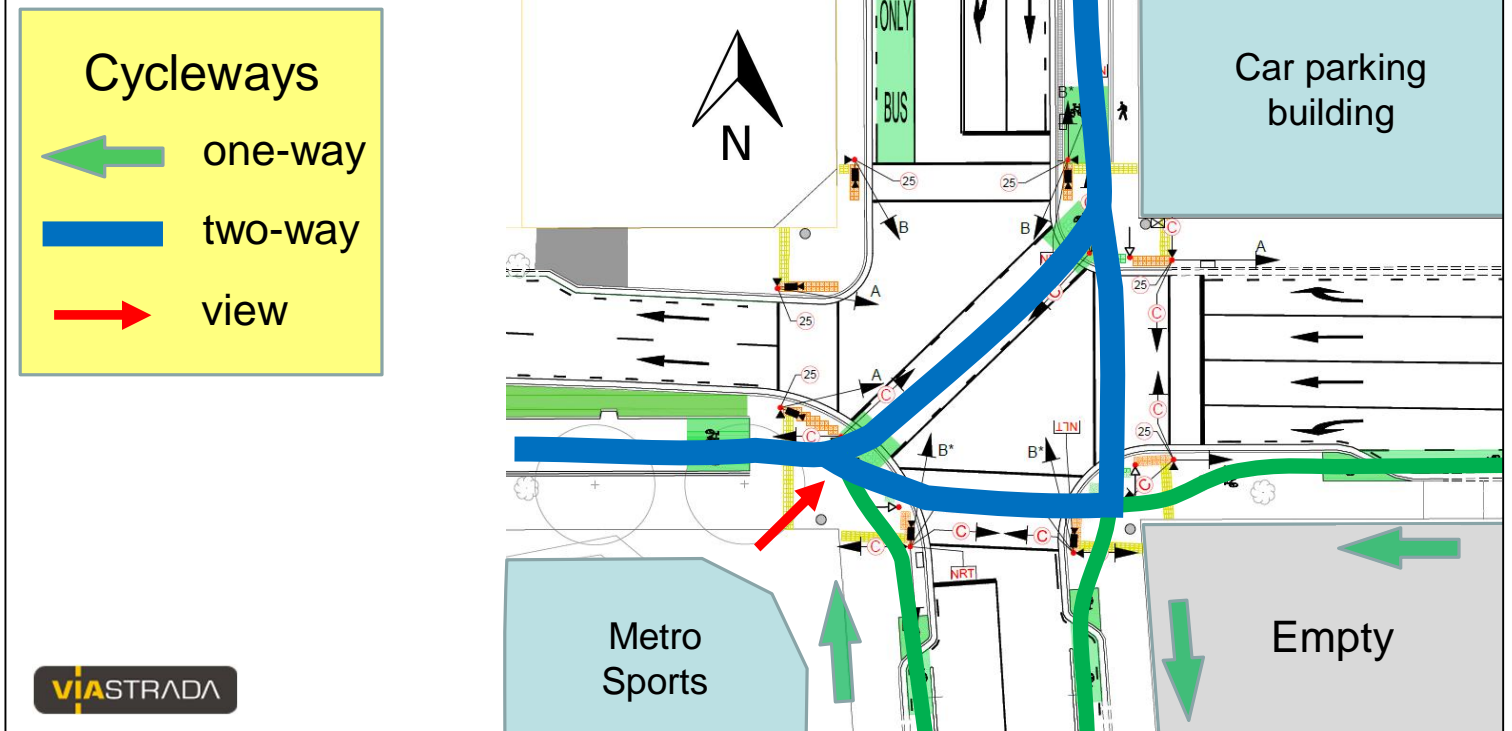
- Observations and thoughts for one of these intersections
 - Antigua / St Asaph (**ASA**), Christchurch
- 1 existing issue
 - Are users just stupid or is the design not right?
- 2 future issues
 - High-use intersection; big growth projections
 - I predict safety issues



In the third part of my presentation, I will now offer some reflections



ASA: cycle movements and land use

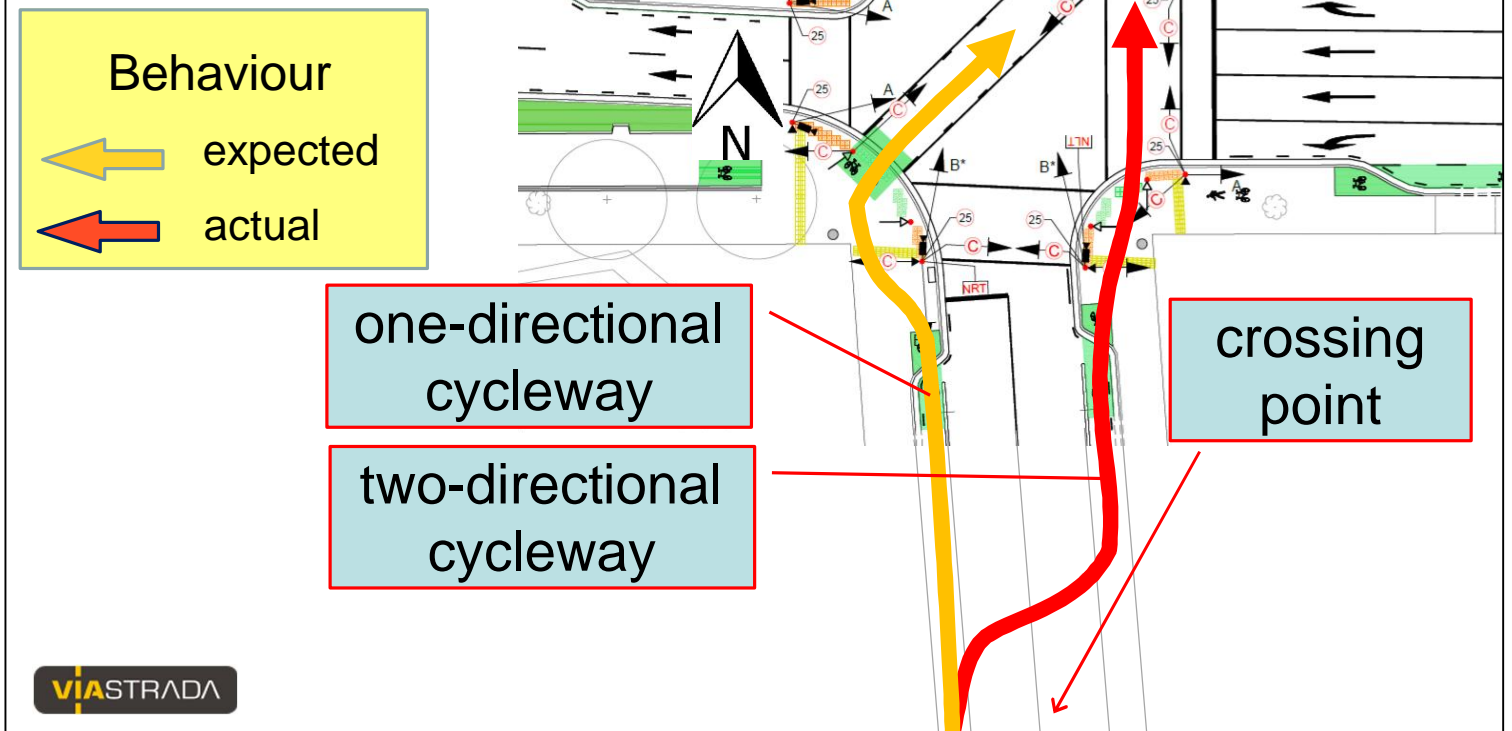


4. Chch trial became operational in late 2018. Has one diagonal crossing and want to operate that separately from through movements.

Installation was delayed, operation will be evaluated soon.



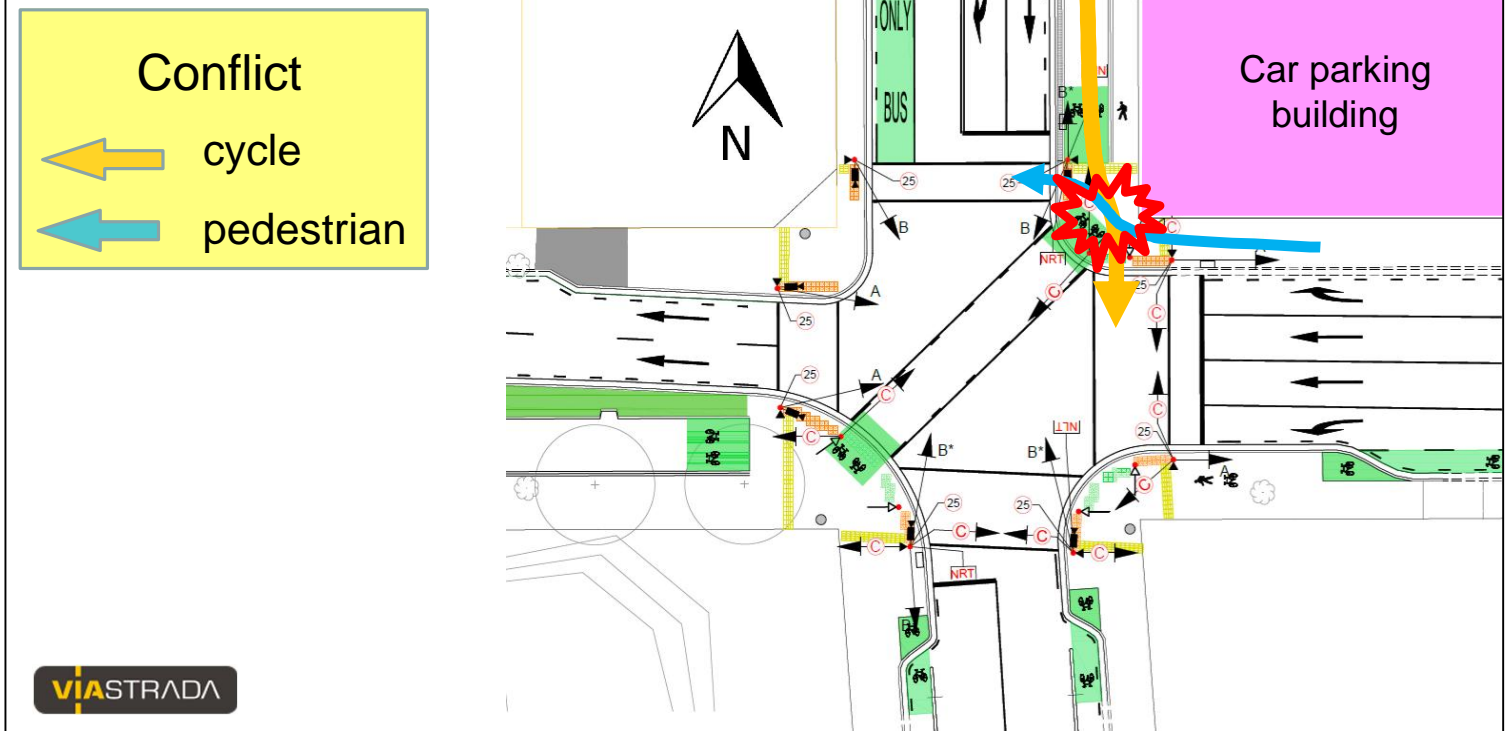
ASA problem 1 (existing): contra-flow



Existing issue – people riding contra-flow on the carriageway before that significantly improves their LOS

Christchurch City currently consulting on a cycleway project where one-way facility becomes two-way and the swap happens mid-block

ASA problem 2 (future): lack of visibility



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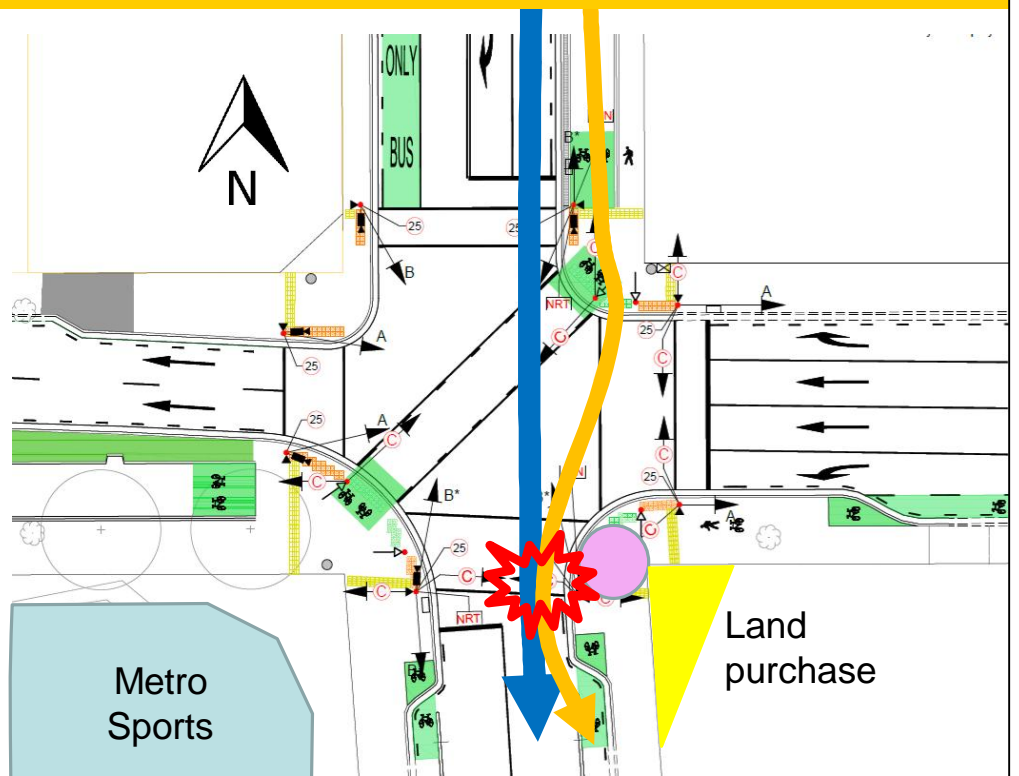




ASA problem 3 (future): lack of space

Conflict

- ← cycle
- ← car / truck



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Summary

- When you provide for cycling at signals
 - Based on signal programme, what user behaviour can you expect?
 - Is there enough intervisibility around the corners?
 - Is there enough room to accommodate future growth?

Thank you!

Questions and discussions



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