Directional Cycle Signals – update

Presentation to
SNUG 2021 Workshop Queenstown

ViaStrada Ltd

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TRANSPORT PLANNING AND DESIGN

Megan Gregory presentation (2018)

SNUG Workshop, Hamilton

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?

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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

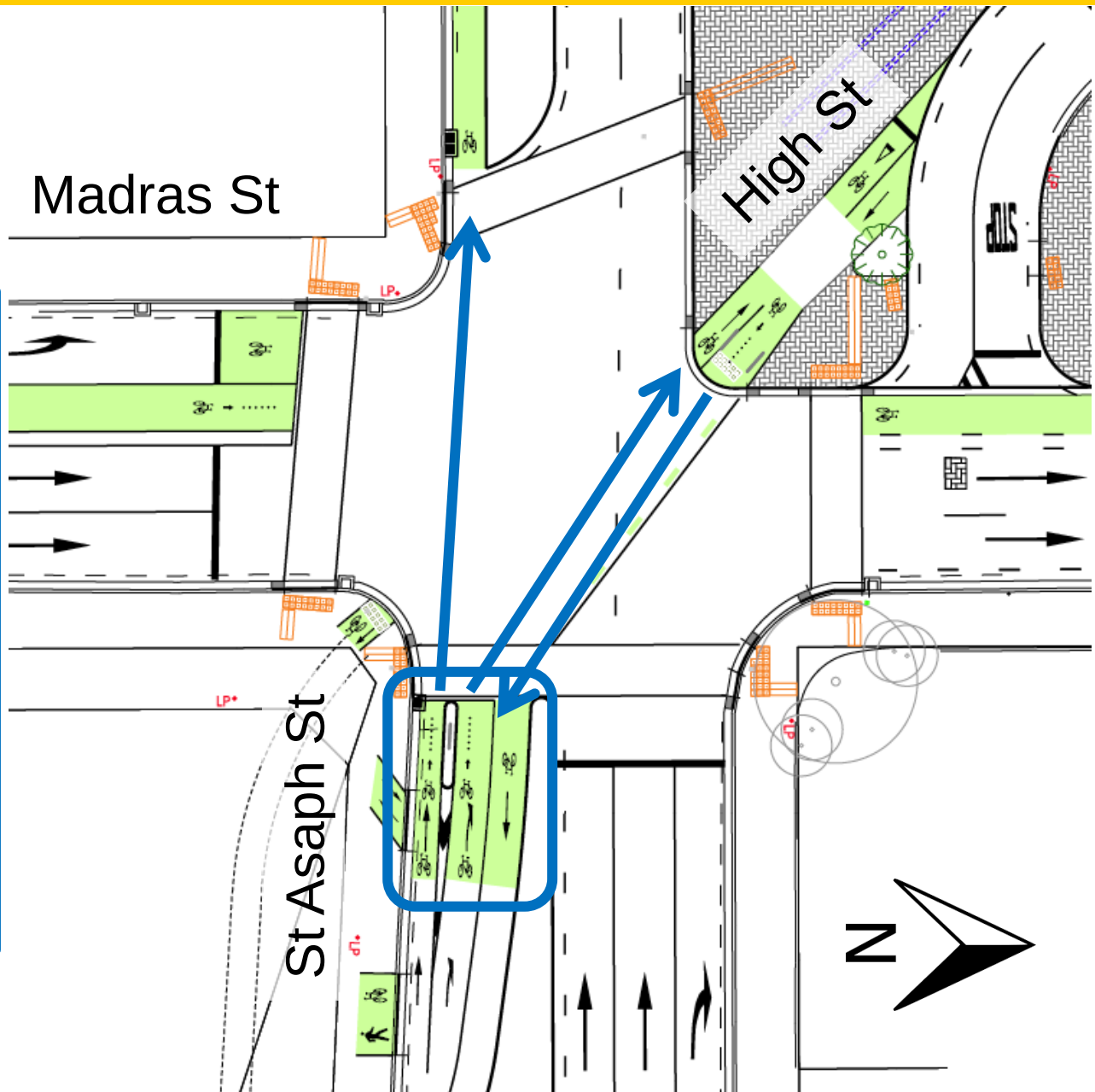
STRAIGHT AHEAD ARROW

RIGHT ARROW

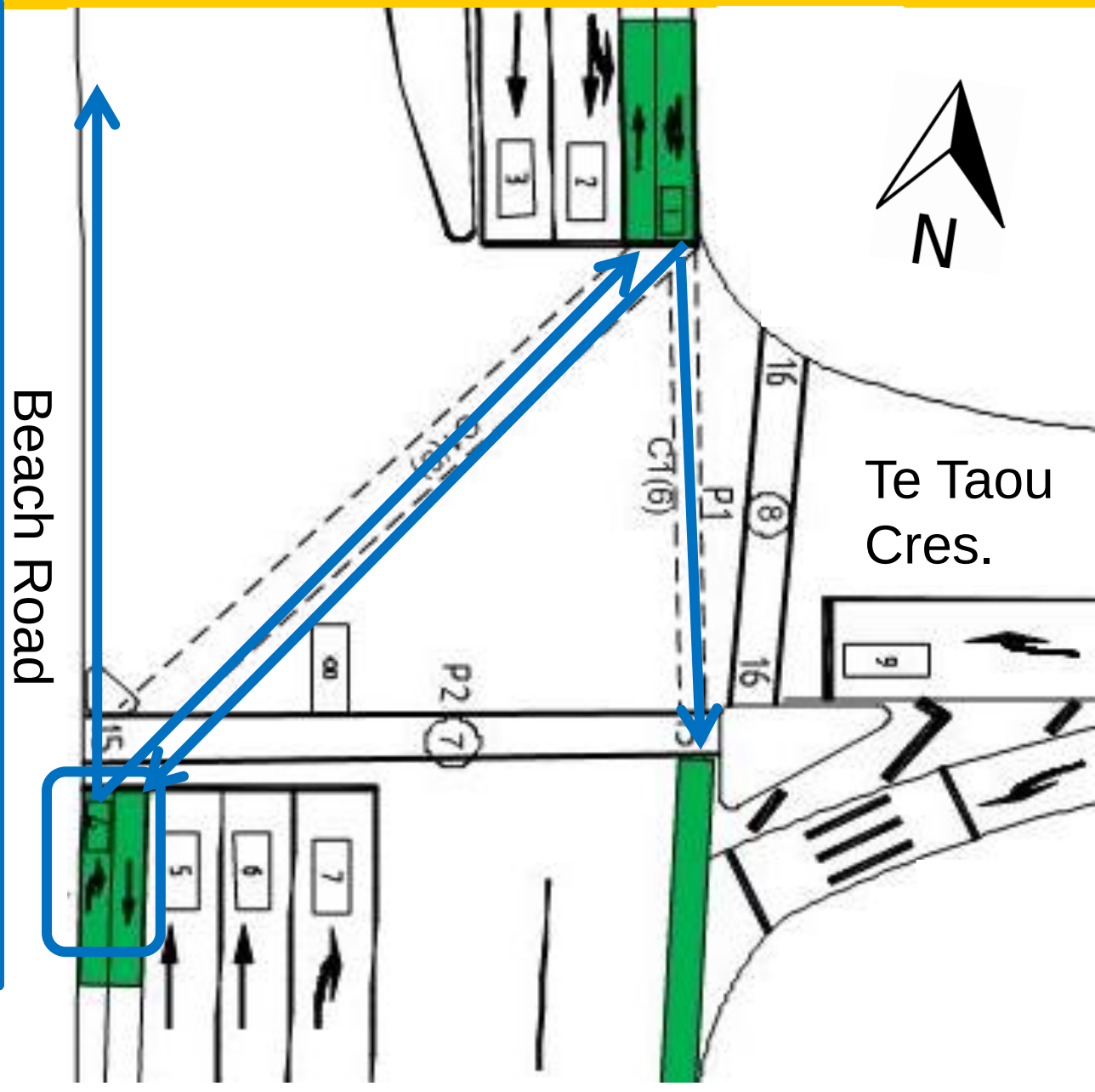
BEAR LEFT ARROW

BEAR RIGHT ARROW

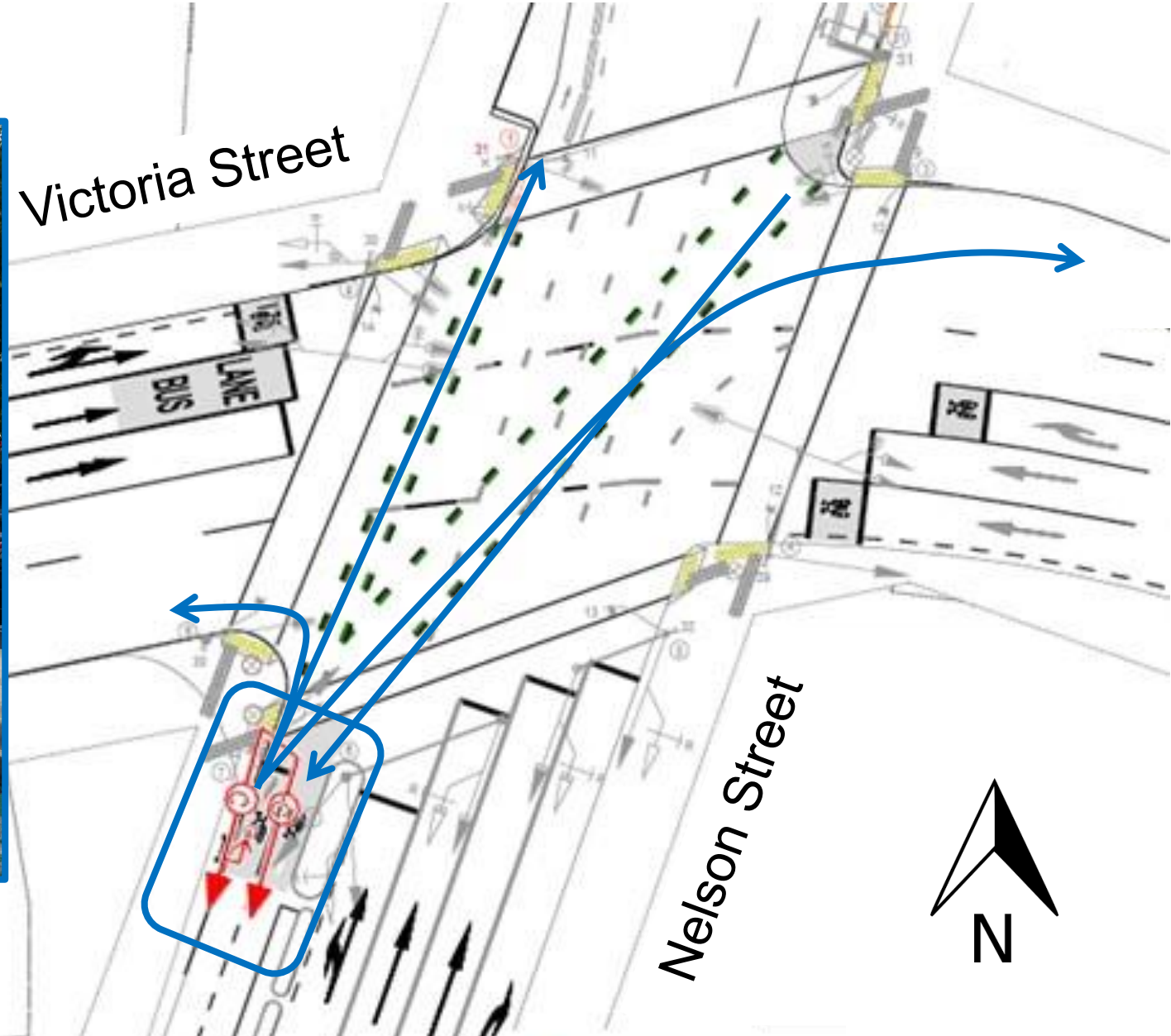
Trial site 1: High / Madras / St Asaph, Christchurch



Trial site 2: Beach / Te Taou, Auckland



Trial site 3: Nelson / Victoria, Auckland



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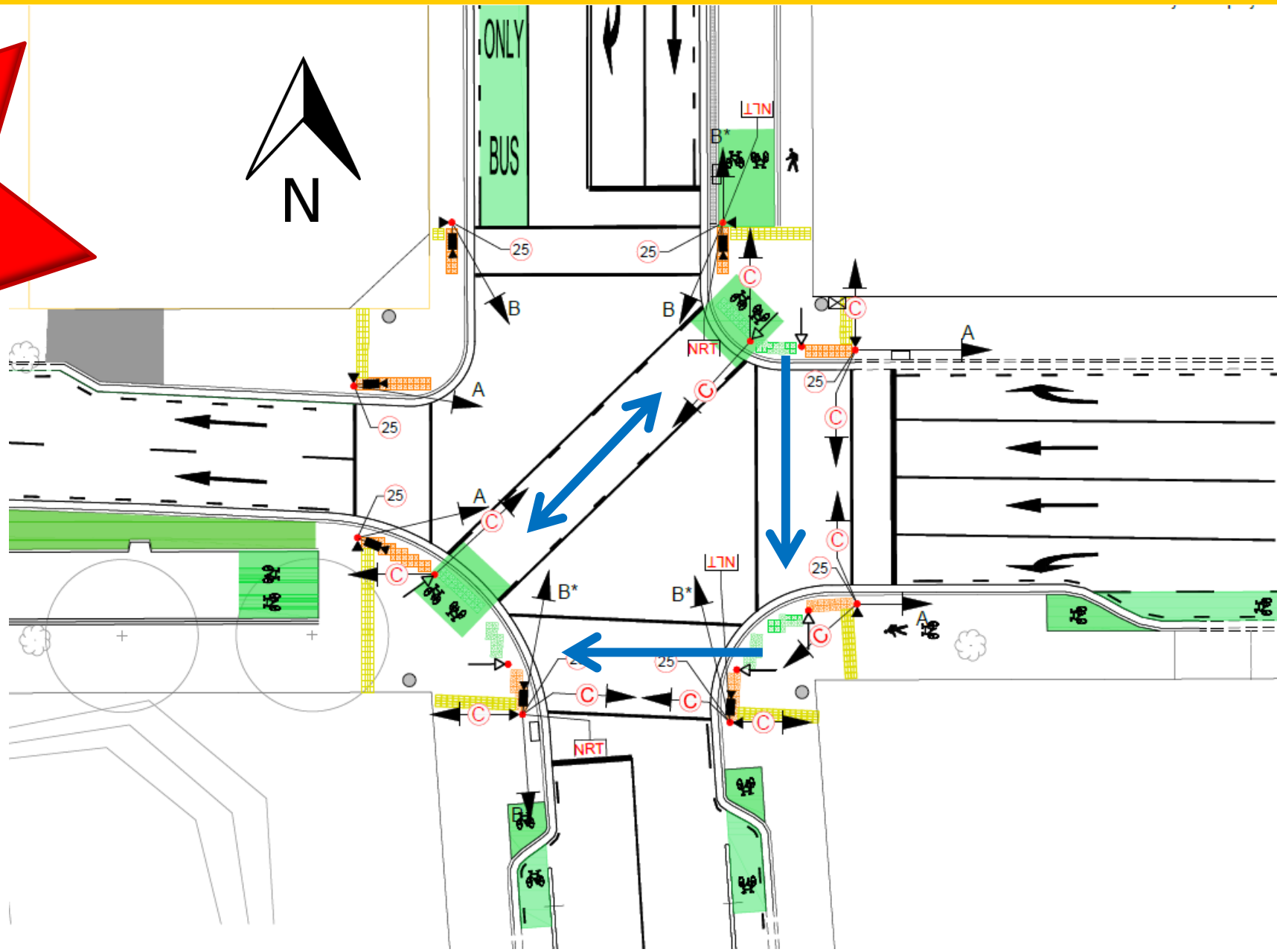
Trial site 4: Antigua / St Asaph, Christchurch

post SNUG



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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

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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

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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

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

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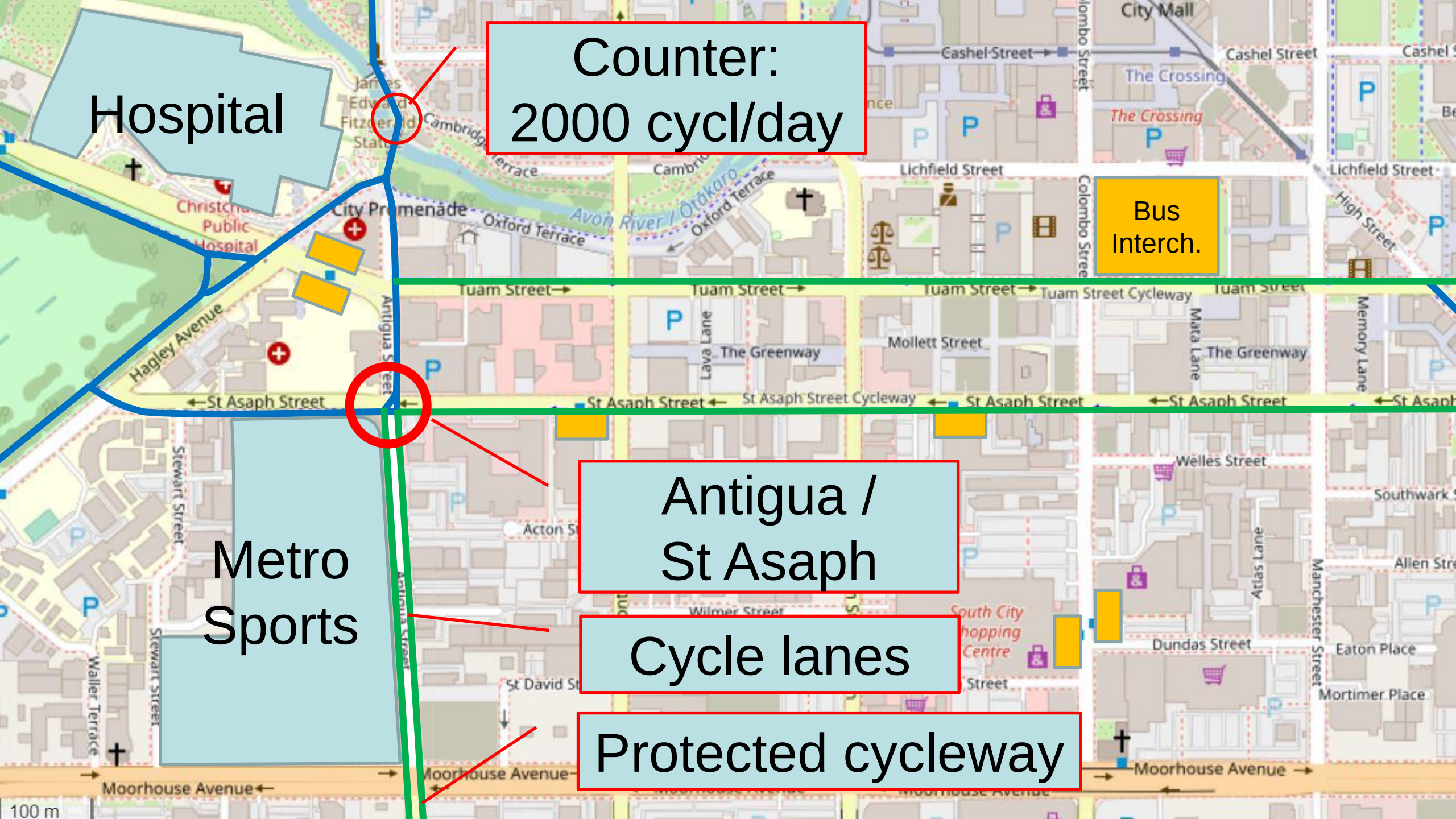
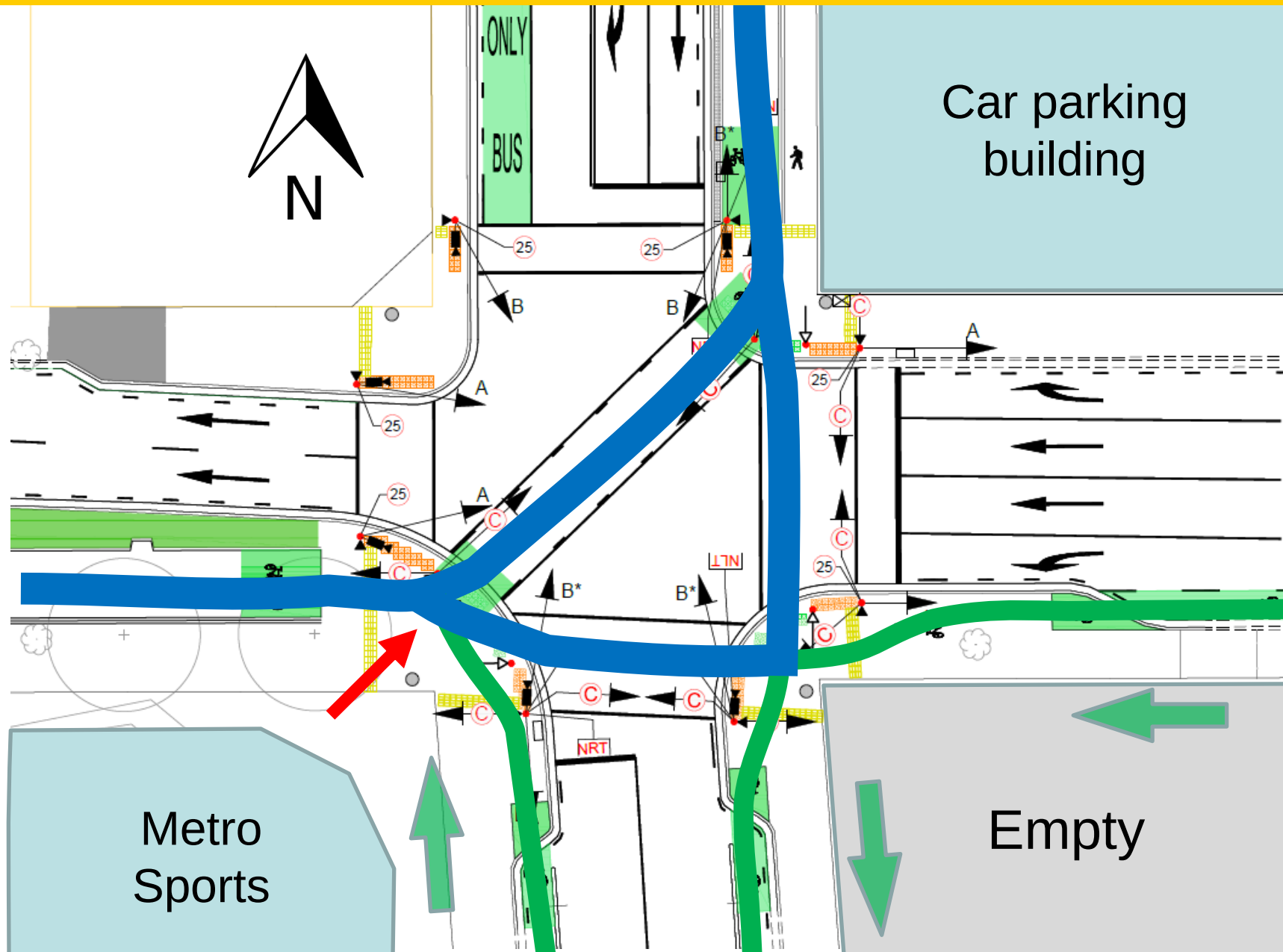

Hospital
Counter:
2000 cycl/day
Bus
Interch.
Antigua /
St Asaph
Metro
Sports
Cycle lanes
Protected cycleway
Cashel Street
City Mall
The Crossing
Lichfield Street
Colombo Street
High Street
Oxford Terrace
Avon River / Ōtākaro
City Promenade
Tuam Street
Tuam Street Cycleway
Hagley Avenue
St Asaph Street
St Asaph Street Cycleway
Antigua Street
Lava Lane
The Greenway
Mollett Street
Mata Lane
Memory Lane
Welles Street
Wilmer Street
South City
hopping
Centre
Dundas Street
Atlas Lane
Manchester Street
Eaton Place
Mortimer Place
Moorhouse Avenue
Stewart Street
Waller Terrace
St David St
Acton St
Cambridge Terrace
Christchurch Public Hospital
100 m

ASA: cycle movements and land use

Cycleways

- one-way
- two-way
- view



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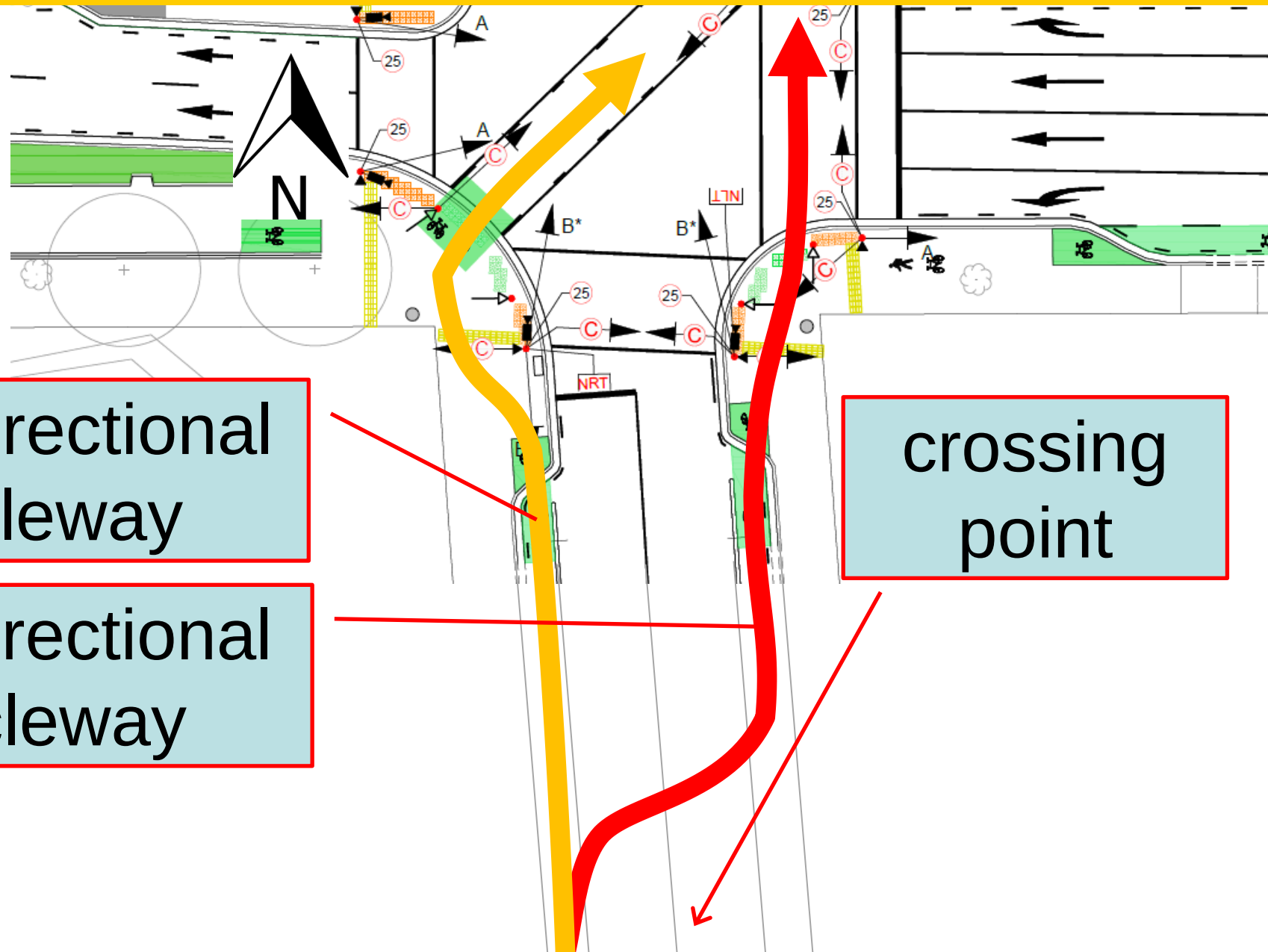
Canterbury
District Health Board
CHRISTCHURCH HOSPITAL
STAFF CARPARK BUILDING
Canterbury
District Health Board
CHRISTCHURCH HOSPITAL
STAFF CARPARK BUILDING
BEGINS

ASA problem 1 (existing): contra-flow

Behaviour

expected

actual



one-directional cycleway

two-directional cycleway

crossing point

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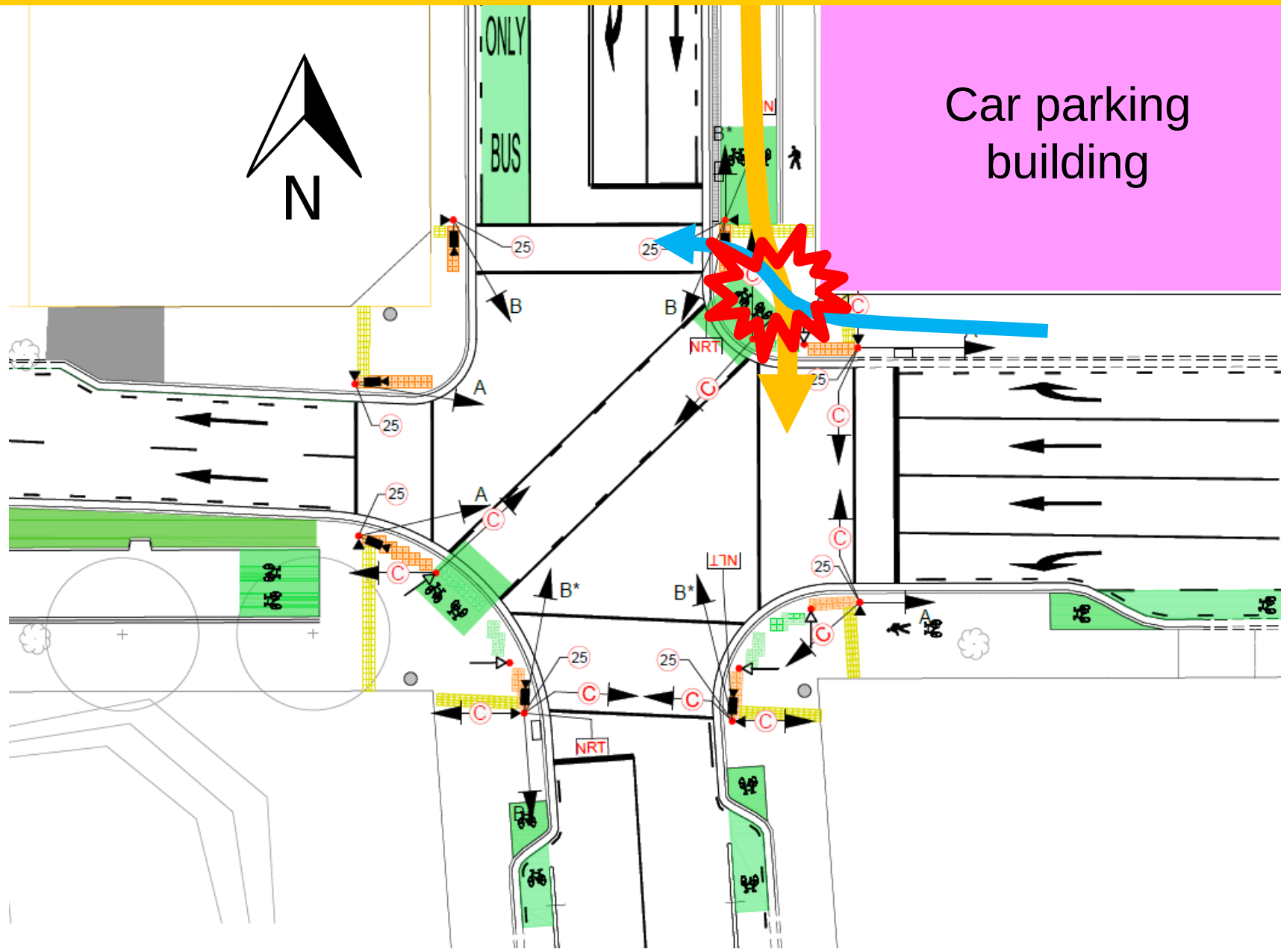
ASA problem 2 (future): lack of visibility

Conflict

cycle

pedestrian



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ENDS
Wilson
Public
Parking
EXIT

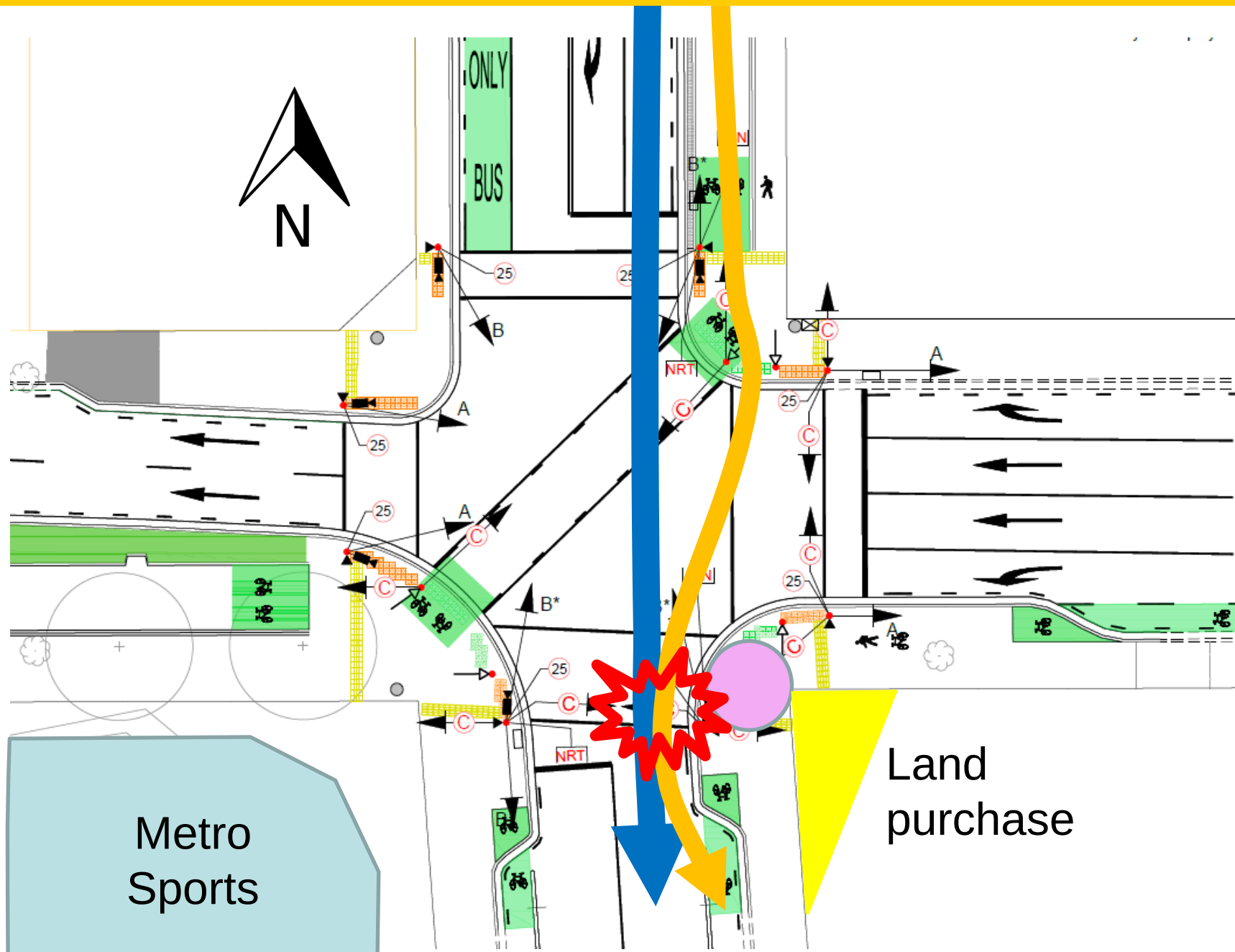

Wilson
Public Parking
P
COMPETE
PLAY
Metro Sports Facility
Something for everyone.

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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