LOW TRAFFIC NEIGHBOURHOODS

Workshop

MRCagney

BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Overview

1. What, why and how of low traffic neighbourhoods

2. Interactive design exercise

What is a low traffic neighborhood?

A neighbourhood area in which cars can **access all local** properties but **through traffic is restricted**.

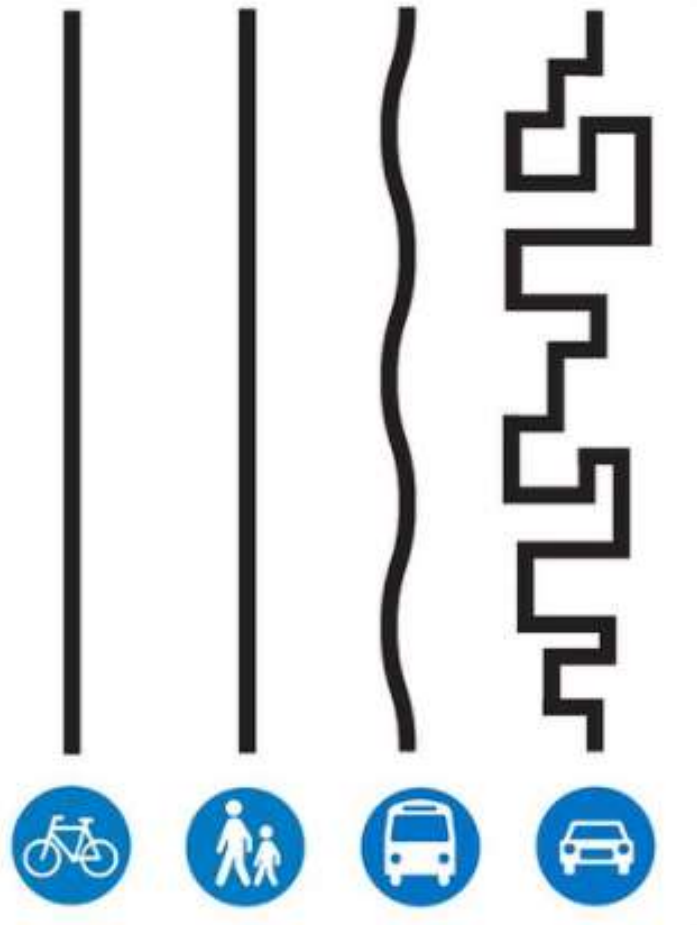
A cluster of ‘quiet’ streets that prioritise walking, cycling, and public life.

MRCagney

BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

What is a low traffic neighborhood?

Key tool: **Modal filters** to improve *relative directness* for people walking and cycling



MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

What's wrong with our local streets?

- Decades of **car-oriented urban planning** has led to environments that **deter everyday trips** by walking and cycling
- Universal permeability for traffic and **indistinct street types**

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

What are the opportunities?

- Responding to **converging crises**: COVID-19, climate change, health, road safety
- Implementing **change the *lighter, faster, cheaper* way** with tactical urbanism approaches
- Liveable, walking and cycling friendly communities
- The **low hanging fruit** of getting mode shift quickly and economically


NO ENTRY


NO
THROUGH
TRAFFIC
EXCEPT


Adrian
TARE
ACCUGROSS
HYBRID


SPRING ST
50A

FUNDAMENTALS

Two pillars of LTN planning

Equally important:

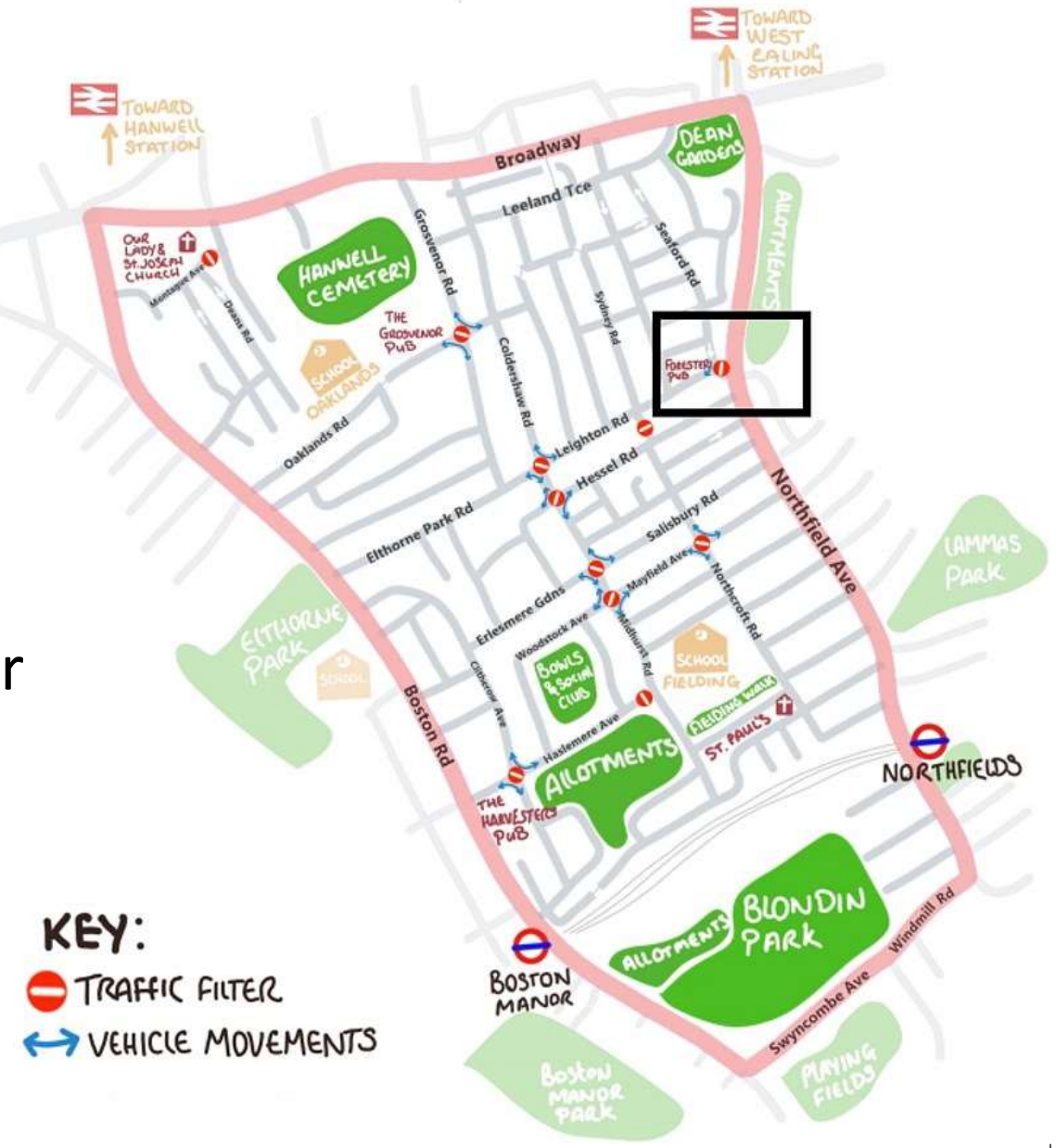
1. Community engagement
   (social, political dimensions)
2. Traffic circulation planning
   (technical, financial dimensions)

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Traffic circulation planning

LTN circulation

- Groups of local streets bordered by busier roads or other barriers
- Scale: 15 minutes' walk maximum across the neighbourhood = 1km² ideally
- Cluster LTNs around town centres or transport interchanges
- Link LTNs together with crossings over barriers (e.g. busy streets)



Traffic circulation planning - overview

1. Identify barriers
2. Identify LTN ‘cells’
3. Rank LTNs
4. Plan interventions

CASE STUDY

LTNs for a better Takutai

1. Establish street hierarchy
2. Set boundaries, identify LTNs
3. Prioritise LTNs based on data
4. Plan interventions

Welcome to Takutai

- Intensifying coastal suburb
- Street hierarchy: Arterial roads, connector streets and local streets
- 2 rapid transit lines and 3 interchange stations
- Mainly residential, 2 main town centres, many clusters of local shops
- 6 primary schools, 2 secondary schools, falling cycle mode share

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

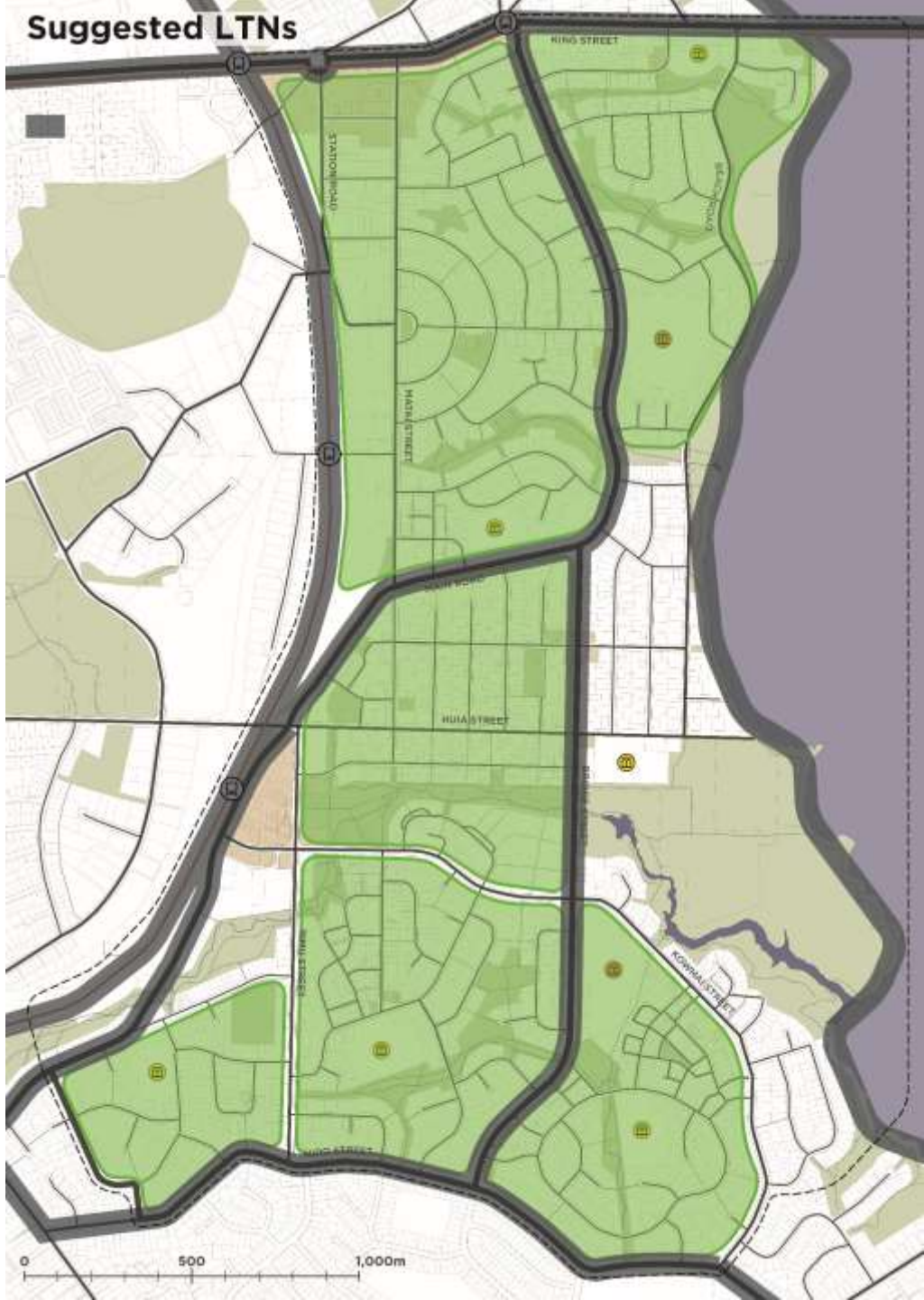
1. Identify barriers

- Barriers = boundaries

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

2. Identify LTN ‘cells’

- Considerations:
  - Scale
    - Making a difference,
    - Avoiding internal trips by car
    - Budget
  - Boundaries
  - Info layers:
    - Rat runs
    - Schools
    - Crash data
    - Public transport

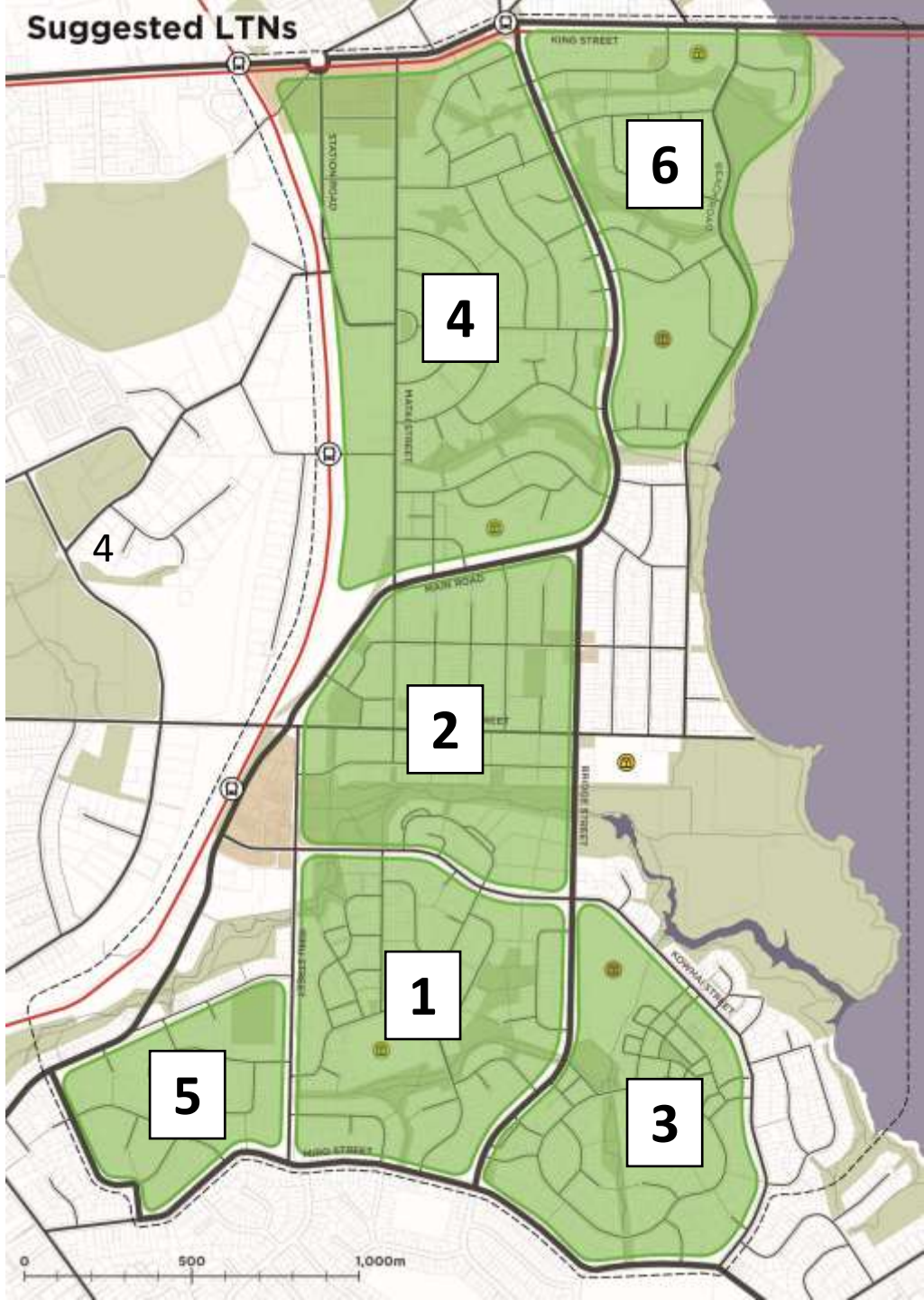


MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

3. Rank LTNs

Consider:

- Poorest **air quality**
- Highest **deprivation**
- Poor access to green space
- Highest **traffic volumes**
- High density of **collisions**
- Greatest number of **schools**
- Low public transport accessibility
- Low car ownership
- Highest childhood obesity
- **Local support**



MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

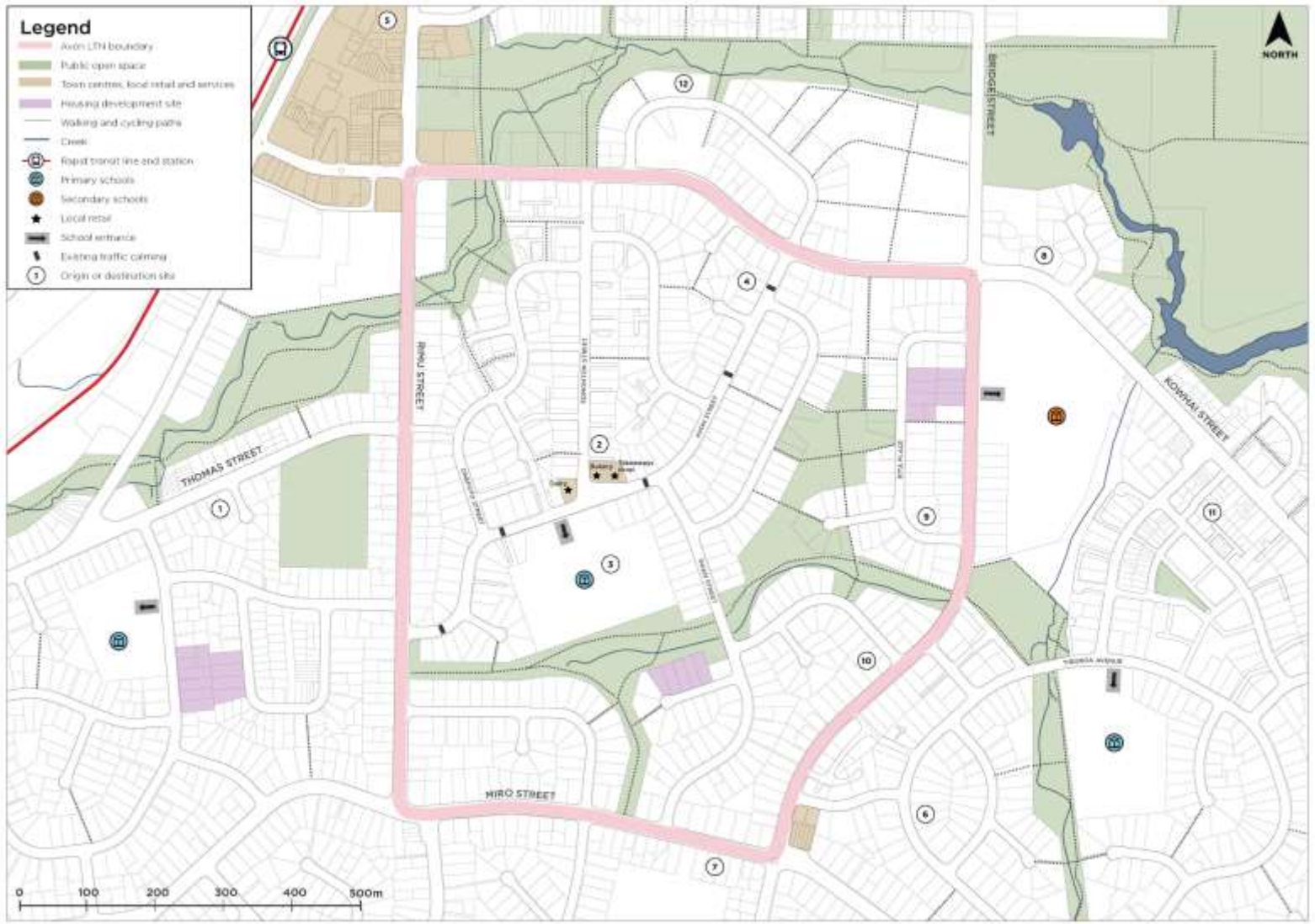
Avon LTN chosen

Considerations:

- Several **rat runs**
- Suitable **size**
- One **school** inside, others nearby
- Adjacent to **town centre** and **rapid transit station**
- High density of **complaints** shows community engagement

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Avon LTN chosen



MRCagney

BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

4. Plan interventions

- Plan interventions to prohibit through traffic
- Add crossings over bounding barriers
- Choose from a toolbox of interventions

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Interventions toolbox

Low Traffic Neighbourhoods

1 Full closure at a point

1a. Mid-block full closure

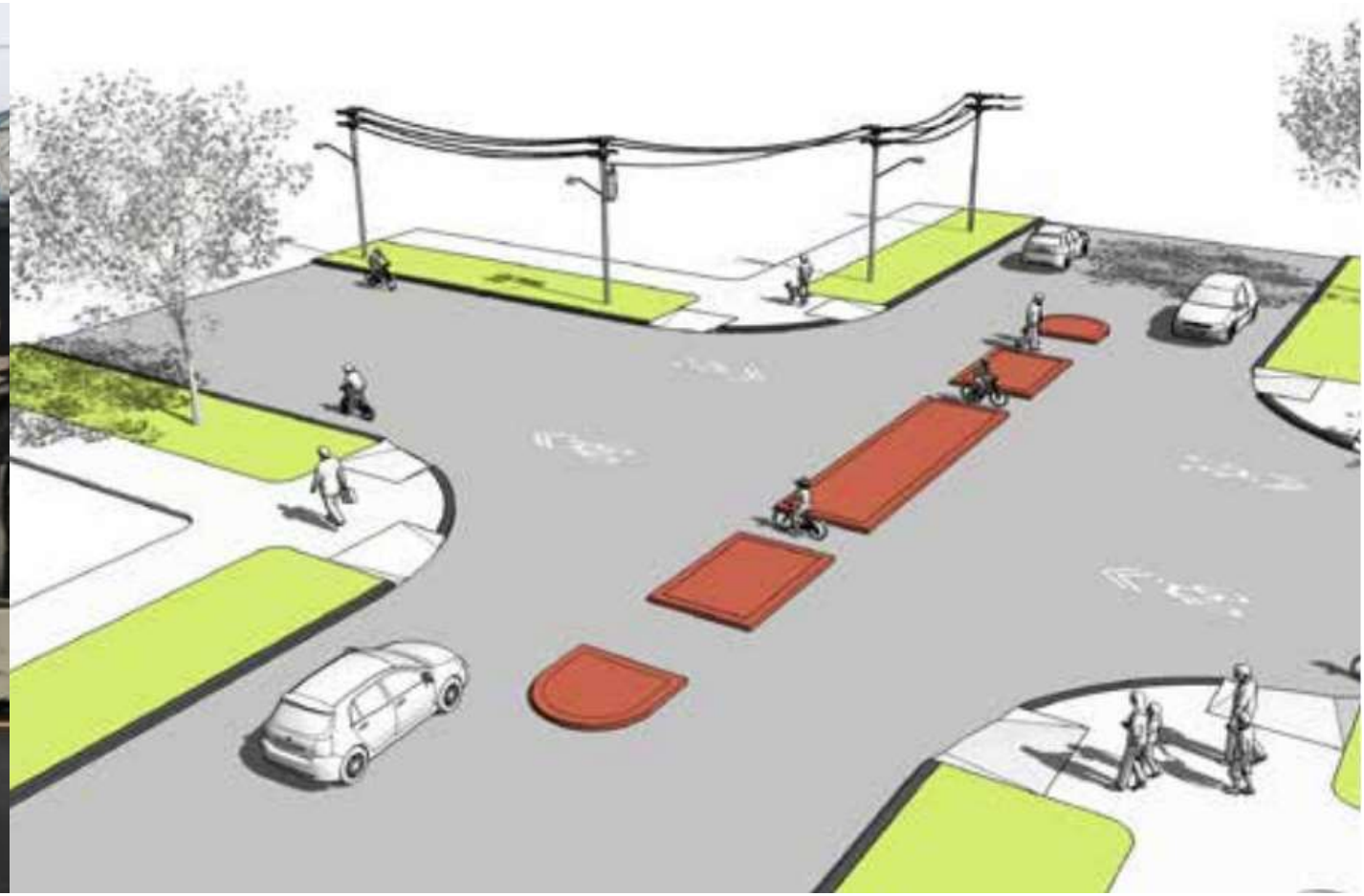
1b. Intersection full closure

2 Partial closure at a point

2a. One-way traffic with contra flow cycle facilities

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

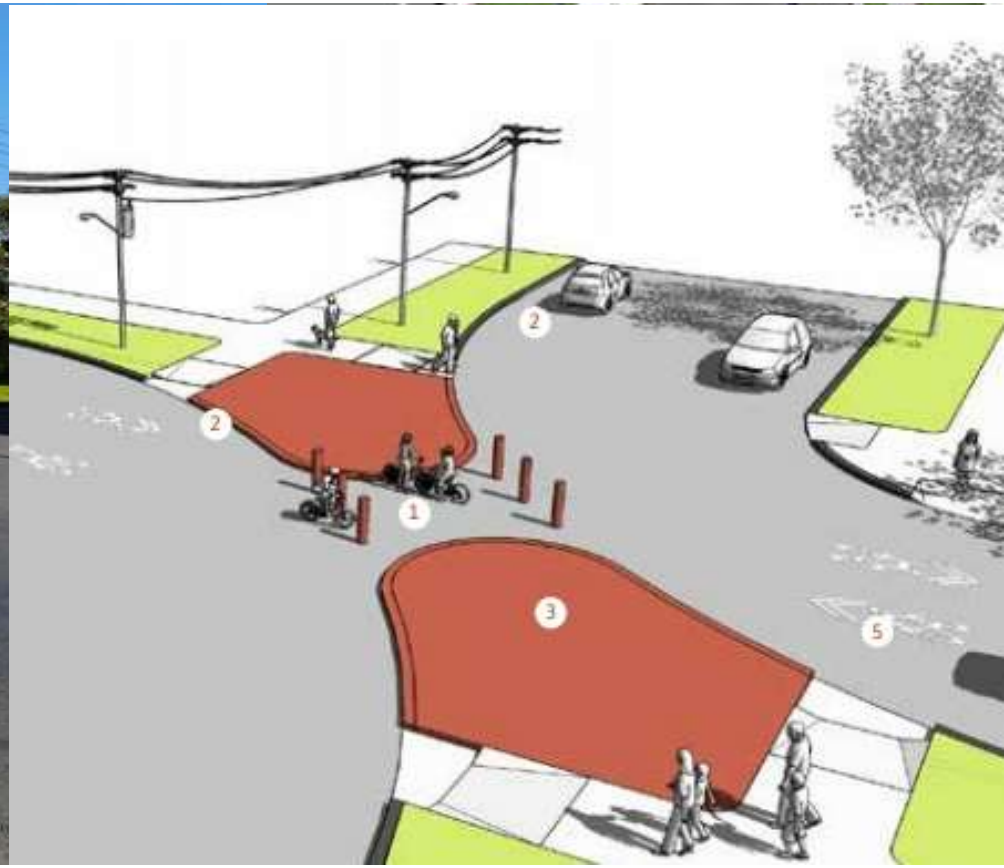
2 Partial closure at a point



2a. Raised median with modal filter

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

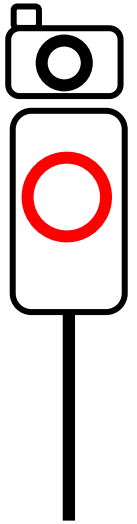
2 Partial closure at a point



MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

2c. Diagonal diverter with modal filter

3 Camera enforced/time restricted zone



Used for school zone, main street and bus gates

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Between LTNs ensure people can cross…

Uncontrolled crossing – Refuge island (raised median)

Controlled crossing – Signals or zebra

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

CASE STUDY - EXERCISES

1. Establish street hierarchy
2. Set boundaries, identify LTNs
3. Prioritise LTNs based on data
4. Plan interventions

Avon LTN

- Rat running traffic
- Low levels of walking to local destinations
- Low levels of walking and cycling to local schools,
- Barriers to get to local trails

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Task 1: Removing Avon LTN through traffic

- Draw through traffic routes onto your map (**RED MARKER**)
- Plan interventions to prohibit/restrict through traffic

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Time allowance: 2 minutes

Task 2: Interventions

Remove identified rat runs using modal filters:

1. Full closure at a point
2. Partial closure at a point
3. Camera enforced/time restricted zone

MRCagney

BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Time allowance: 10 minutes

Task 2: Analyse the impacts

Track trips for **before (BLACK MARKER)** and **after (BLUE MARKER)** your interventions:

- #1 to #3
- #4 to #7
- #2 to #10
- #5 to #6

- Discuss and record for presenting back:
    - How much longer is this new journey? Estimate length and estimate time
    - What users would be negatively affected by this change?
    - Could this trip be easily replaced by a walking/cycling trip?

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Time allowance: 10 minutes

Task 3: Navigating issues

Your design has been implemented on the ground over several weekends.

Draw Issue cards and come up with solutions to problems that have arisen since implementation.

Be creative and consider problems and solutions from different perspectives.

MRCagney

BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Time allowance: 10 minutes

Task 4: Benefits

Come up with examples of what positive feedback you might hear from a resident living in the low traffic neighbourhood

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Time allowance: 5 minutes

Presenting back

- Task 1: How did you remove through traffic?
- Task 2: What were the impacts of your changes?
- Task 3: What issues came up and how did you address them?
- Task 4: What positive feedback did Avon LTN residents have?

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Time allowance: 10 minutes

END

Thank you for your efforts!

Rat runs

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Public transport

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Schools data

MRCagney

BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Crash data

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Complaints data

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Filter transport modes using…

Modal filters:

1 **Full closure**

- T-intersection
- Mid-block

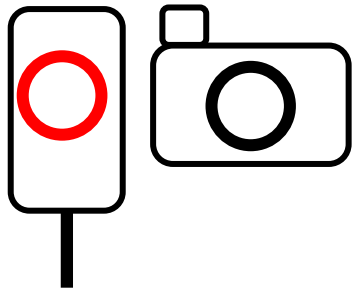
2 **Partial closure**

- One way
- Raised central median
- Diagonal diverter

3 **Signage/camera enforced/tim restricted**

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

3 Signage/camera enforced/time restricted



School zone

Main street

Bus gate

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

Task 3: Navigating issues

- Come up with some solutions to address issues e.g. moving or adding new interventions
- Be creative and put yourselves in these people's shoes, how would you like that issue addressed?
- 5 months left of trial - solutions could be staged
- How could monitoring and measuring could be used as part of these solutions?

Time allowance: 15 minutes