Auckland Shared Zones: Design Solutions for Urban Activity Centres

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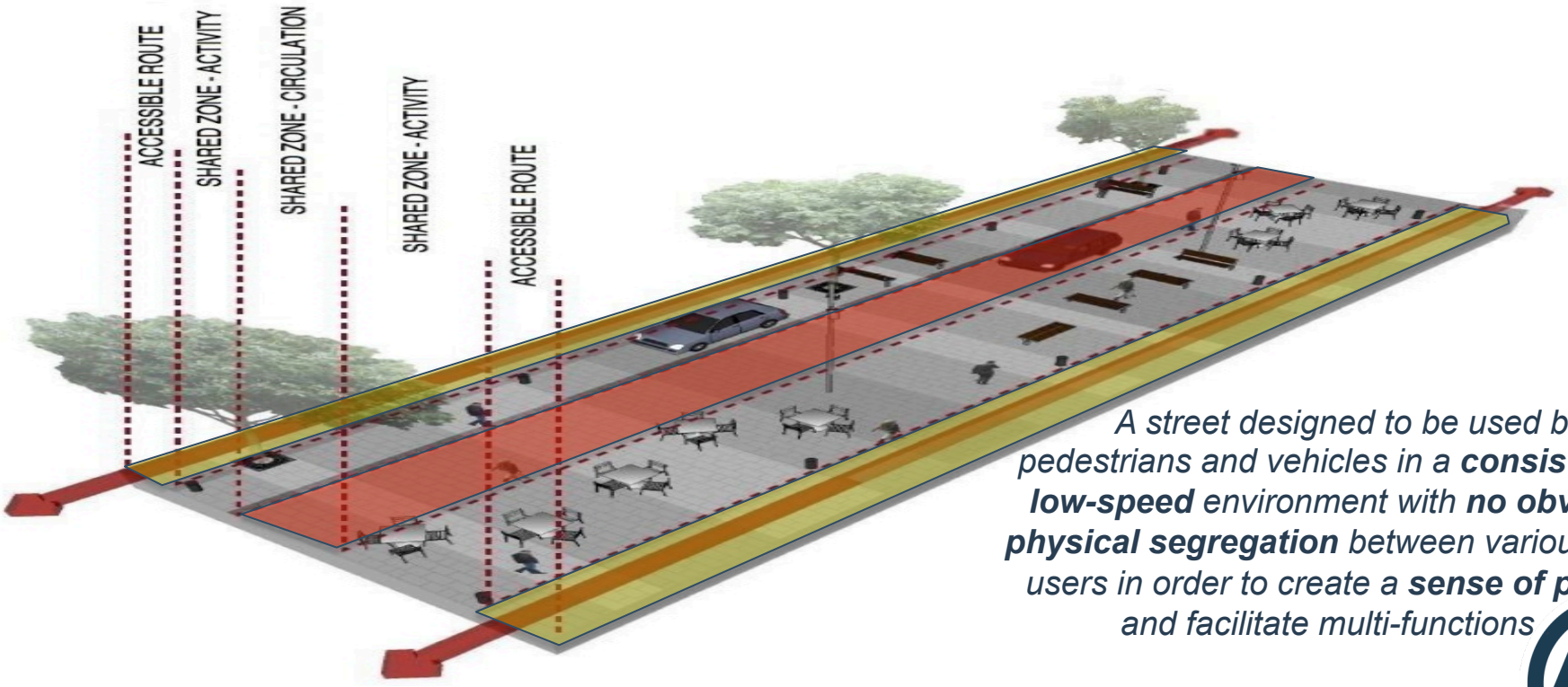
Shared Zones: What and Why

- **Deliver *'attractive mixed-use environments with high-quality public spaces'***
  - City Centre, and Metropolitan Centres
  - Design solution → Shared zones?

- **Inform design guidelines by comparing design characteristics of existing shared zones**
  - **Vehicular speed** vs. Distinguishing design features
  - Safety record

Shared Zones: Common Features



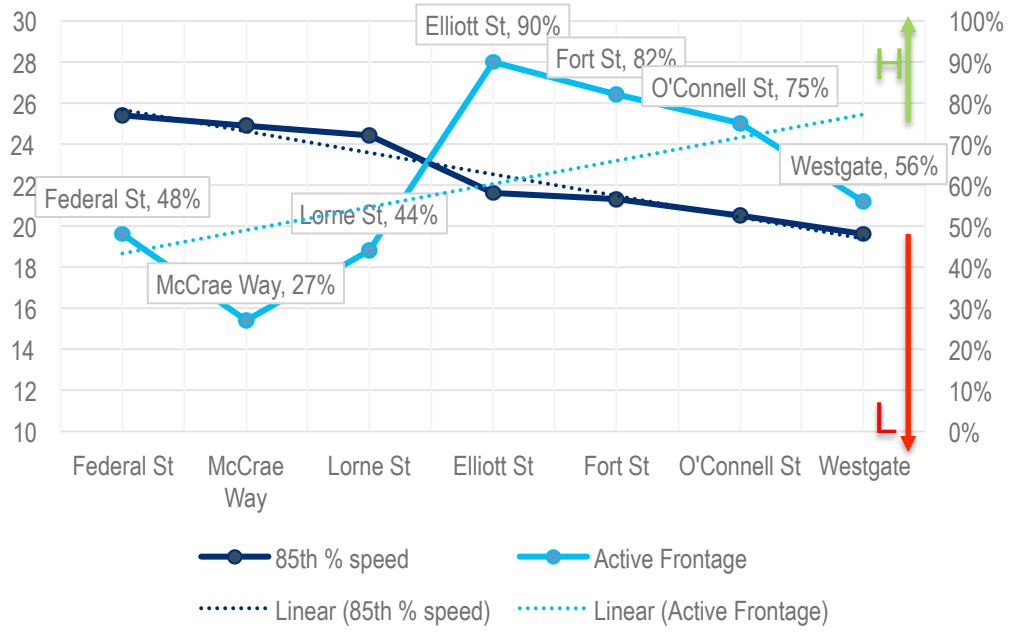
*A street designed to be used by pedestrians and vehicles in a **consistently low-speed** environment with **no obvious physical segregation** between various road users in order to create a **sense of place**, and facilitate multi-functions*


Queen Street Markets
Queen Street Markets
Mis City
Mis City
Mis City
Brookf
BALLISTIC
TATTOO
B.B.Q
Buffet
HIGH STREET FORE
FOOD CO

Shared Zones: Distinguishing Features

- **Active Frontages**
  - Proportion of transparent frontage so that activity is visible from the street
- **Street Layout**
  - Linear vs non-linear
  - Circulation zone widths
- **Vehicular Speed: Key factor in safety**

Vehicular Speed vs. Active Frontage



- **Vehicular speed**
  - 85%ile speed range: 19.6km/hr – 25.4km/hr
- **Inverse relationship: High active frontage / low vehicular speed**
  - Consider land use:
    - Highest activity: Retail, Cafes
    - Lowest activity: Parking
  - Exception: Westgate

Vehicular Speed vs. Linearity

- **Norm**
  - Insufficient comparative cases
- **Westgate**
  - ‘Y-intersection’
  - Highest volume and low-medium activation, but lowest speed

Vehicular Speed vs. Linearity

- **Insert video**

Vehicular Speed vs. Circulation Width

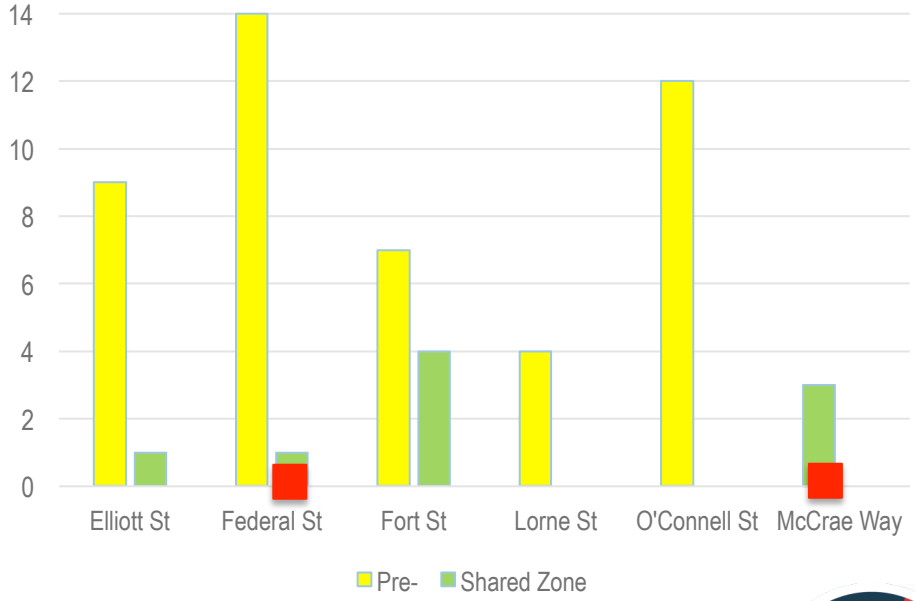
Shared Zone	Speed (km/hr)	Circulation Zone (single lane) width (m)
Federal St	25.4	8
McCrae Way	24.9	2.7
Lorne St	24.4	8
Elliott St	21.6	4
Fort St	21.3	5
O'Connell St	20.5	4.5
Westgate	19.6	5

- **No trend discernible**
- **Industry practice prevails**
  - Narrow lanes reduce speeds
  - Loading requirements → Land-use consideration

Safety

- **Crash Data**
  - From opening to May 2016
  - 2-year data for Federal St and O'Connell St, 3-year data for McCrae Way
  - Reduction in crashes in retrofitted streets
  - Parking and manoeuvring

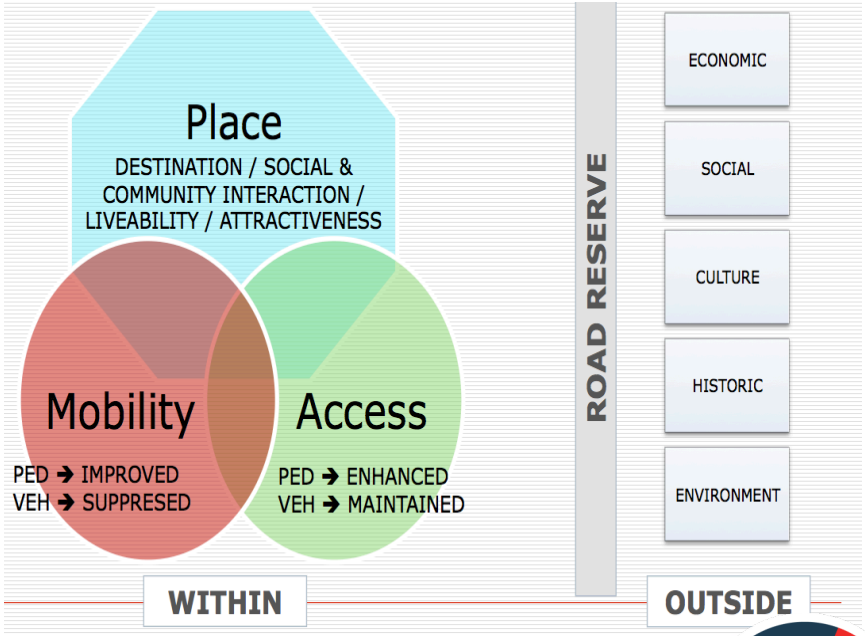
- **Pedestrian Safety**
  - Federal St and McCrae Way (lowest activation)
  - Lack of attention by pedestrian



Observations

- **To achieve lower speeds, design needs to incorporate:**
  - High proportion of active frontages
  - Type of land uses contributing to this
  - Non-linear vehicular route

- **Further work required**
  - Quantitative analysis: Optimum pedestrian vs vehicle ratio?
  - Qualitative analysis (AT-funded PhD study):
    - Placemaking
    - Pedestrian focus
    - Vehicular behaviour change
    - Economic impetus
    - Safety for all users



Discussion

Auckland Transport
An Auckland Council Organisation