Australia's Major New TOD Urban Growth Corridors

Evan Jones
Brookfield Multiplex
Chair Australian Council for New Urbanism

The Views Expressed are solely those of the Author

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Making livable communities that work

The **structuring** of Regional Growth Corridors is key to **reducing carbon** and other footprints:

- Developing **more compactly** - at higher residential and employment densities reduces vehicle kilometres travelled

- **Mixing land uses** to bring housing closer to jobs and shopping can reduce trip lengths as well

- **Shorter trips** reduces VKT by making walking and cycling more competitive alternatives to the automobile, while higher densities make it easier to support public transit

Sustainable Growth Management Model

CONVENTIONAL (Sprawl)

Still in many Local Government Codes

Part 1

Australian Urban Models:

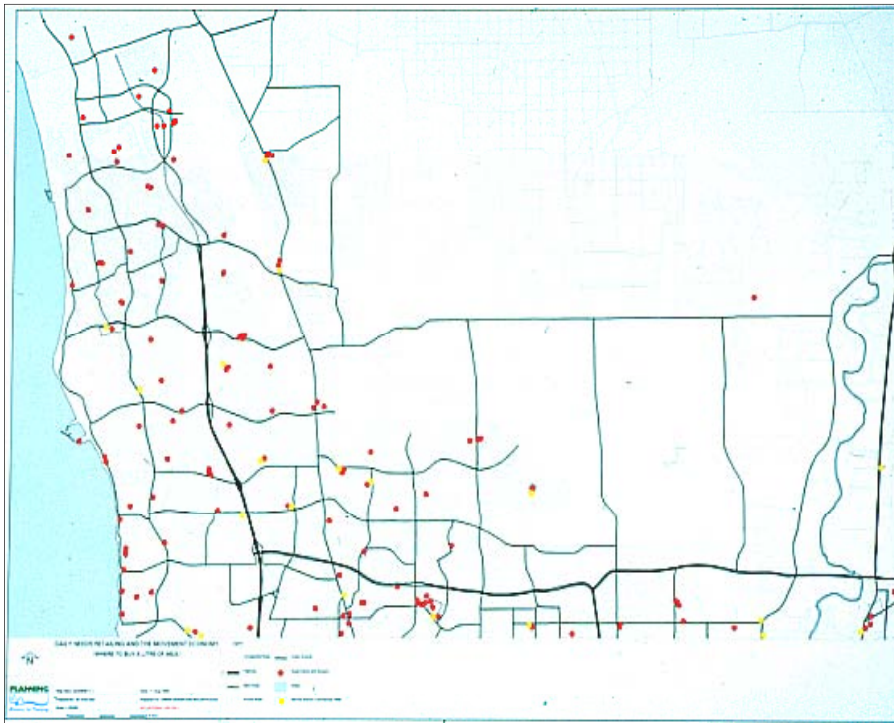## Perth, Melbourne, Brisbane

ACNU Australian Council for New Urbanism

Australian Urban Models: Case Study # 1. Perth How Suburbs Work - Self-Sufficiency
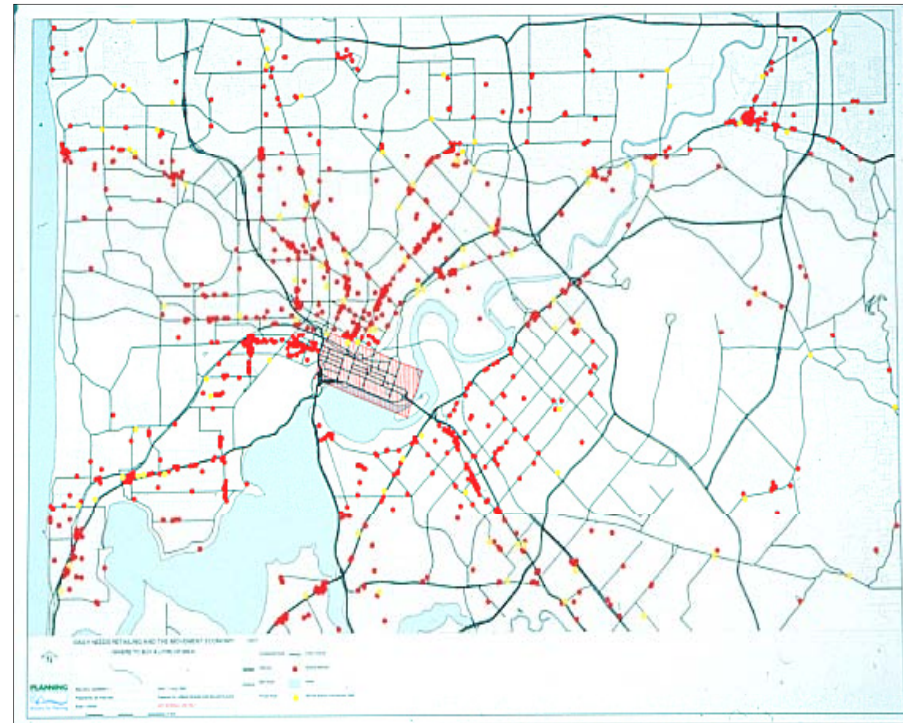
Conventional/sprawl Suburbs

Traditional 'grid' street Suburbs

North-West Corridor Perth

Use a litre of petrol to
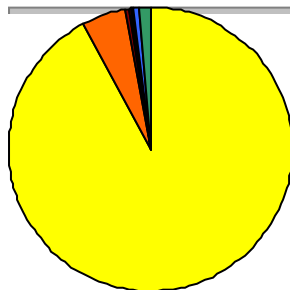buy a litre of milk!

Perth Inner City/Central Suburbs

Buy a litre of milk
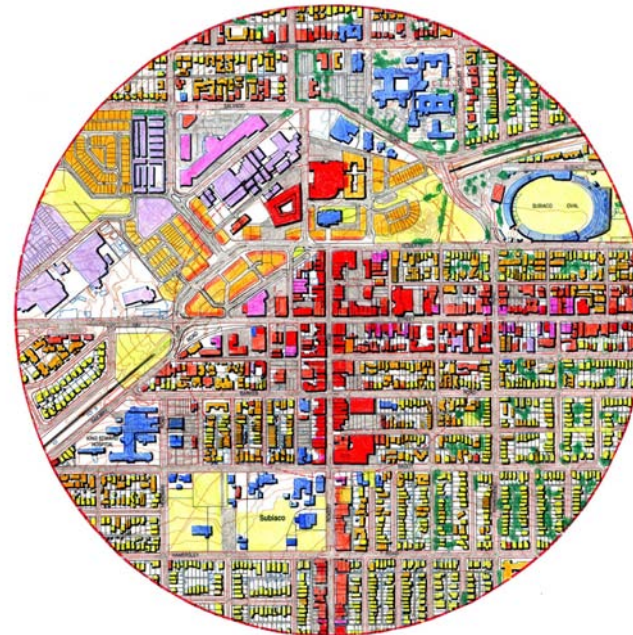within walking distance

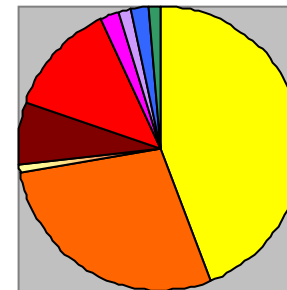# Australian Urban Models: Case Study # 1. Perth How Suburbs Work - Diversity

Hillarys – Land use map

Legend:
- Single Res
- M.D. Res
- H.B.B.
- Retail
- Commercial
- Bulky Goods
- Light Ind.
- Community
- Parks

Subiaco – Land use map

Legend:
- Single Res
- M.D. Res
- H.B.B.
- Retail
- Commercial
- Bulky Goods
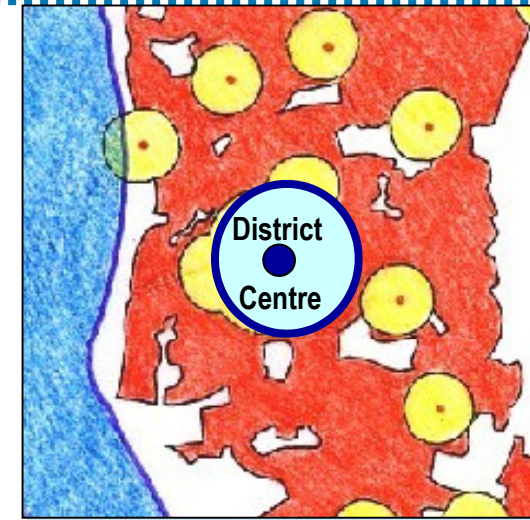- Light Ind.
- Community
- Parks

Australian Urban Models: Case Study # 1. Perth How Suburbs Work - Self-Sufficiency

Not only is the notional catchment for **Hillarys** much larger, there is also a greater proportion of the area (shaded **red**) with **no proximity** to any centre at all.
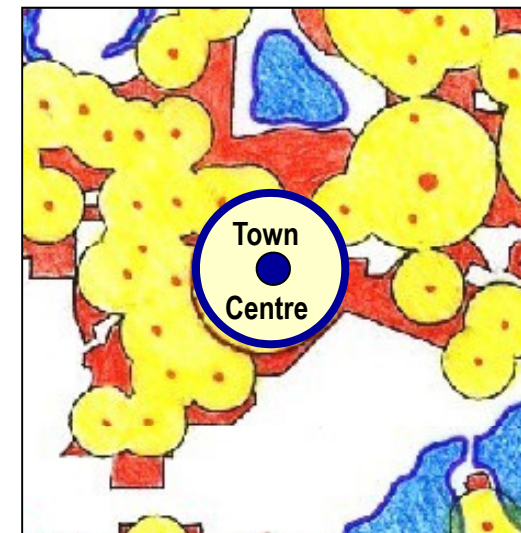
This area is **highly car dependant** on the **Hillarys** regional centre.

Sprawl Suburb: Hillarys

The traditional **Subiaco** centre is smaller and supported by a cluster of neighbourhoods via direct transit connections.

Subiaco achieves much greater residential densities and **employment self-sufficiency**.
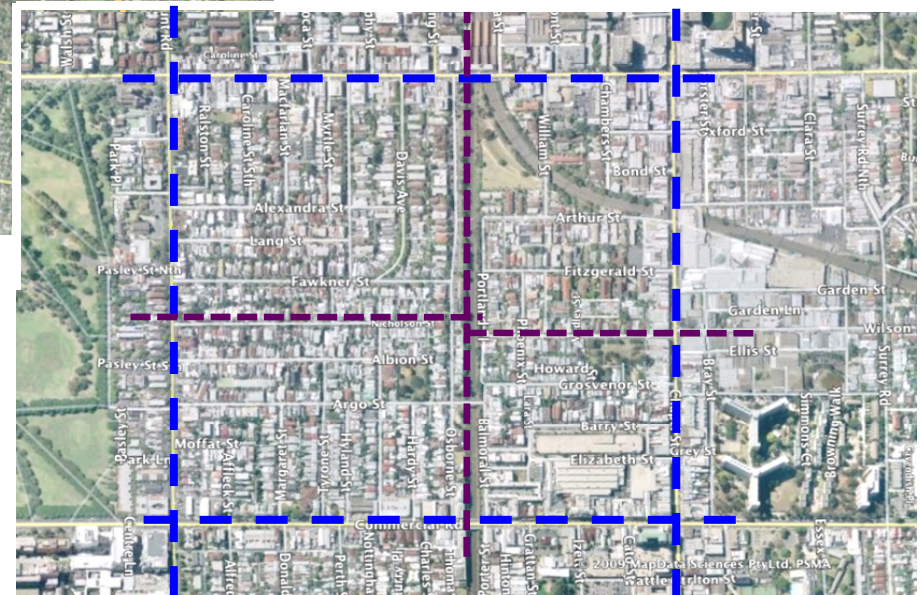

Traditional Suburb: Subiaco

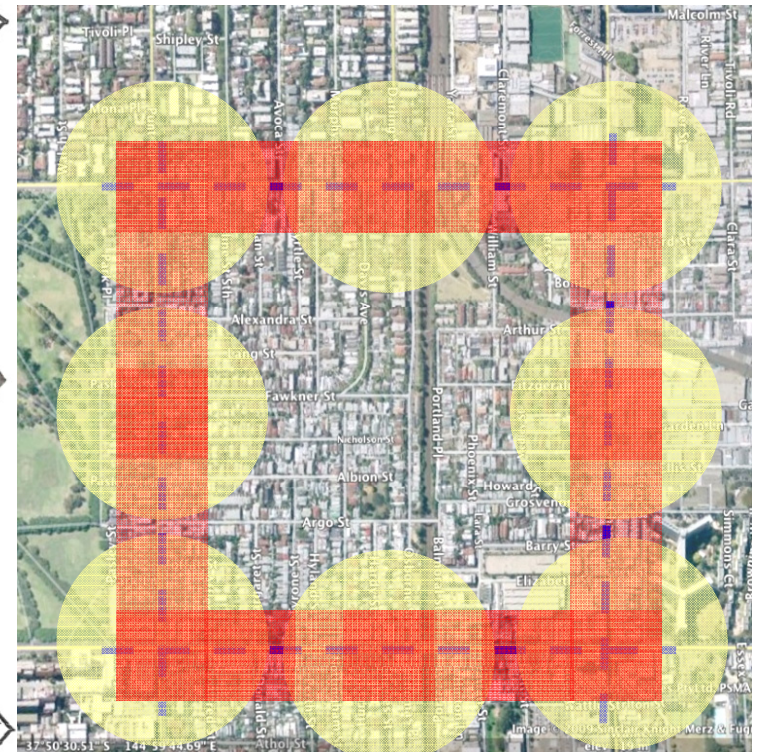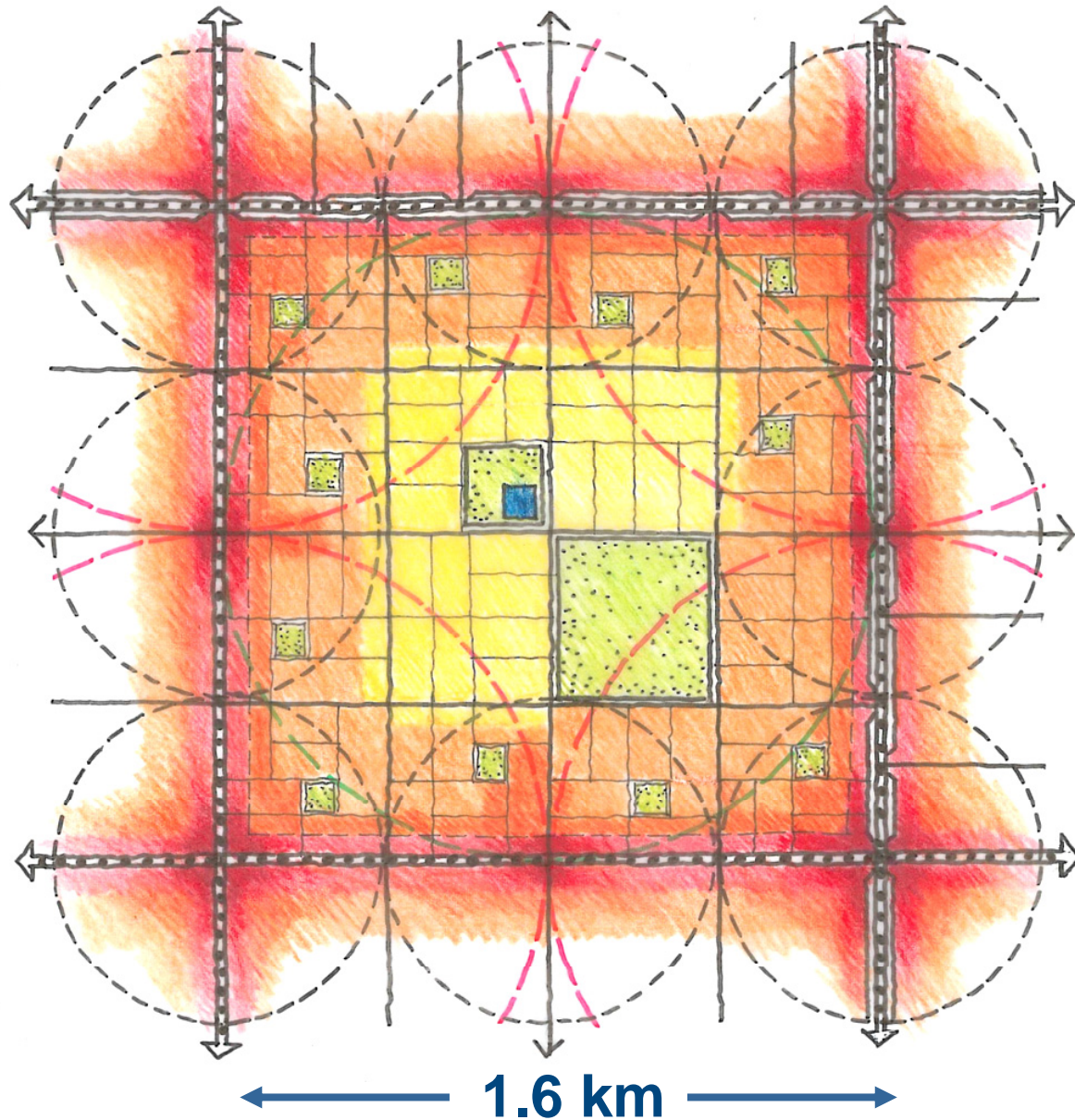# Australian Urban Models: Case Study # 2. Melbourne Town and Neighbourhood Structure

Town and Neighbourhood Structure

1.6 km

Mile grid (1.6km) with **half-mile arterials** (800m) and a **smaller permeable street** network, to minimise need for arterial and retail gigantism

Australian Urban Models: Case Study # 2. Melbourne Town and Neighbourhood Structure

1.6 km

1.6 km

Australian Urban Models: Case Study # 2. Melbourne

Town and Neighbourhood Structure

Australian Urban Models: Case Study # 3. Brisbane Town and Neighbourhood Structure
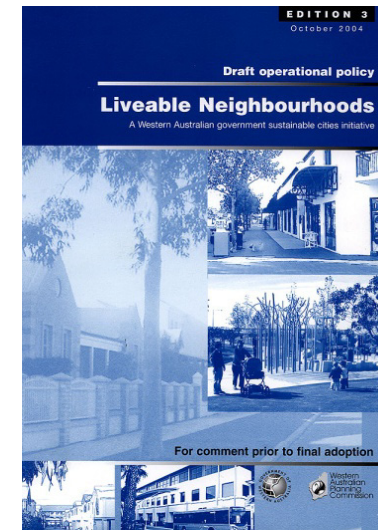

Brisbane Inner West

Streets, Centres, Open Spaces

Hilly terrain inspires ridge roads and deforms the grid

Neighbourhood Structure

Town Structure

Deike Richards

Part 2

Integrated Urban Structuring in Australia
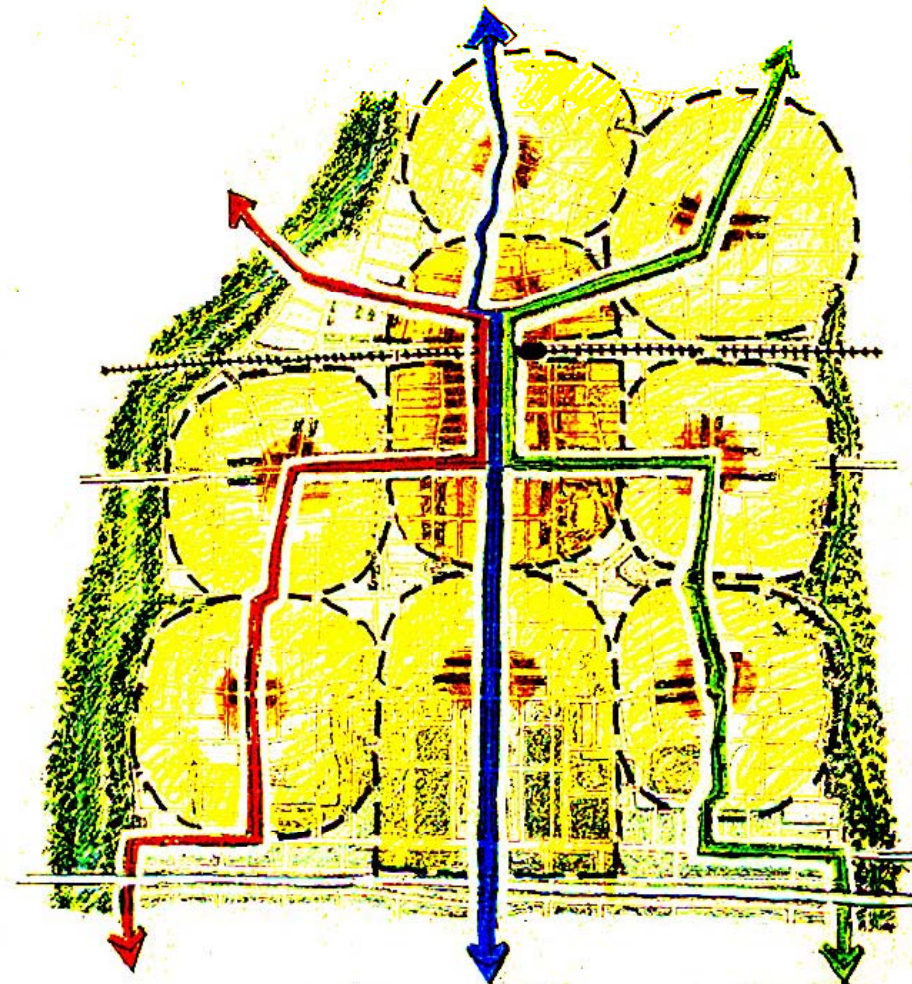
Walkable Neighbourhoods cluster together to form mixed use Towns

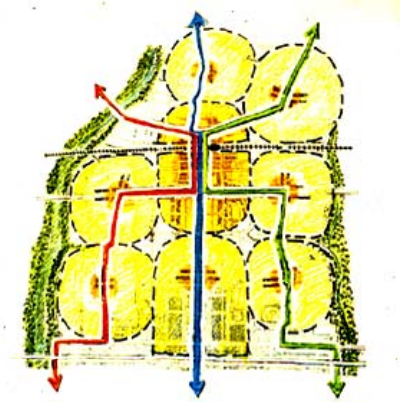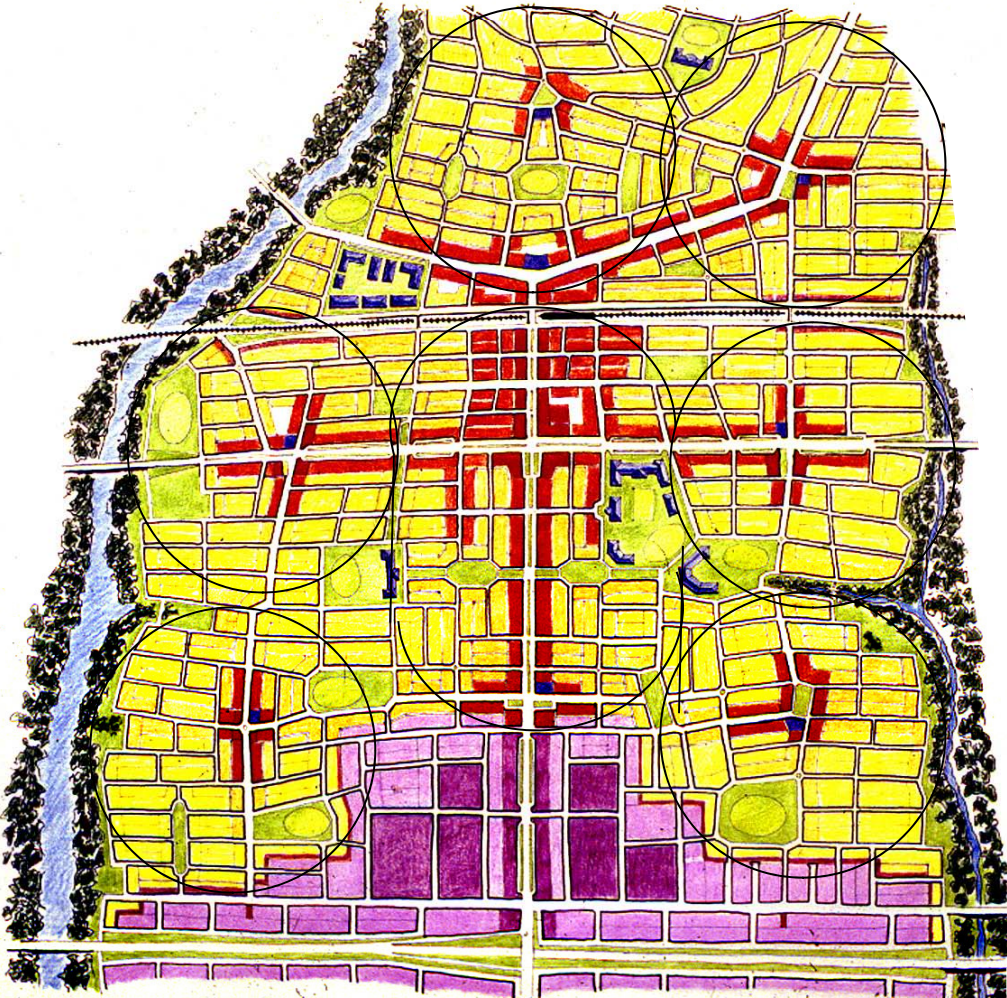The Australian **Liveable Neighbourhoods** structure:

- Mixed use **town centre** serves around 15,000 to 30,000 people

- **Main-street retail**

WALKABLE CATCHMENTS AND BUS ROUTES

**Ecologically Sustainable Design**

Detailing a Town Structure

- A **cluster of neighbourhoods** to support a town centre

- Locating and sizing centres on the **movement economy**

- Uses **compatibly mixed** in close proximity

- Defining **transit routes**

- Protecting **heritage & environmental** assets

# Neighbourhood Centres Key Success Factors

Part of **a larger supportive urban structure** with an effective 'pedshed' to the centre
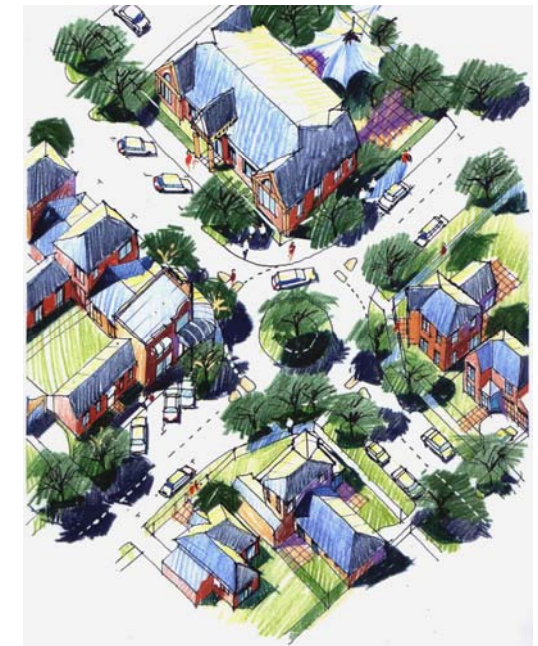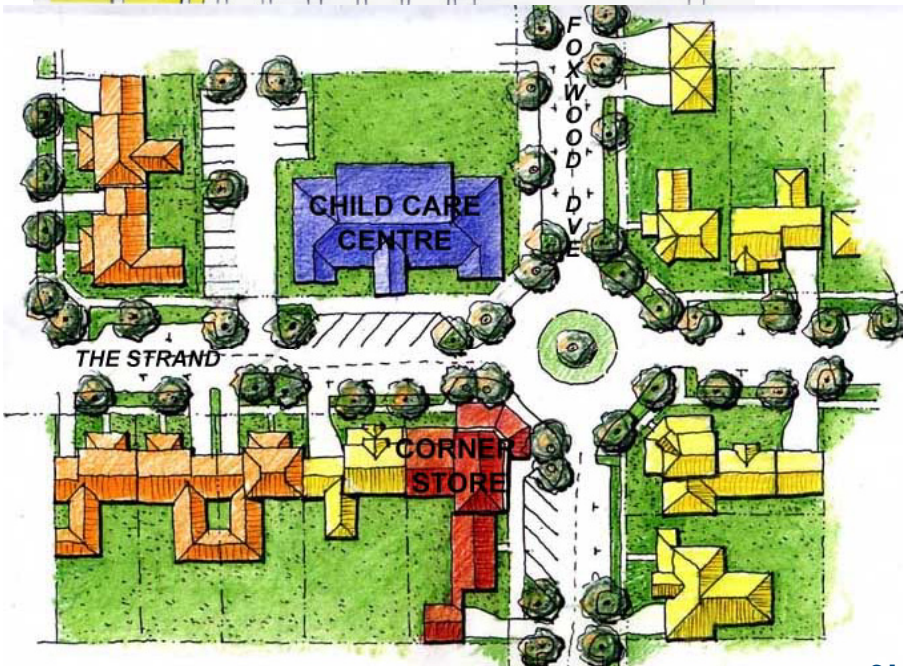
Strand Neighborhood Center, Melbourne, now operating

Regional Structuring Examples: Jindalee, North-West Corridor, Perth, WA 1996

Highly-planned 'sprawl' in ever-extending corridors - an urgent need to change as road networks would fail
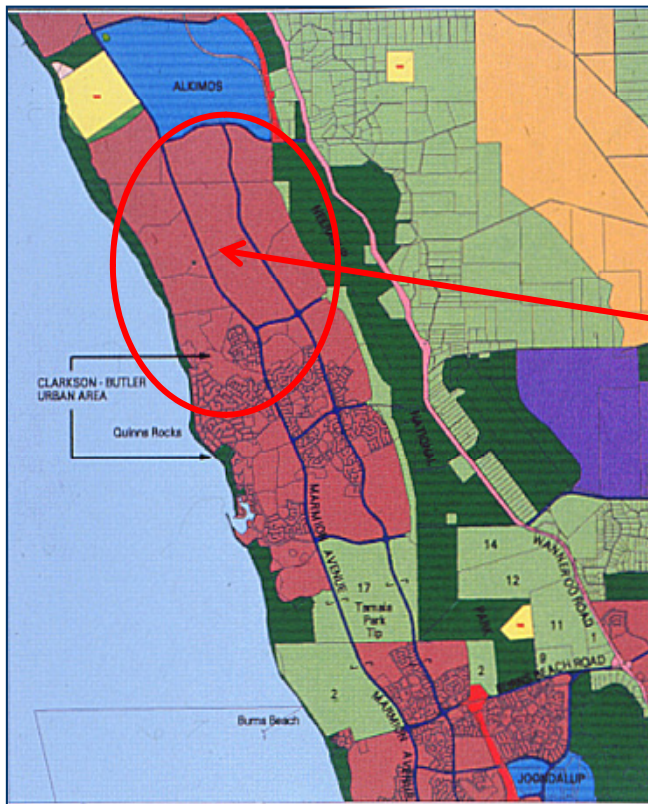
1995 North-west Corridor Structure Plan

Typical subdivision plans

Regional Structuring Examples:
Jindalee Regional Structure Scenarios

Scenario A
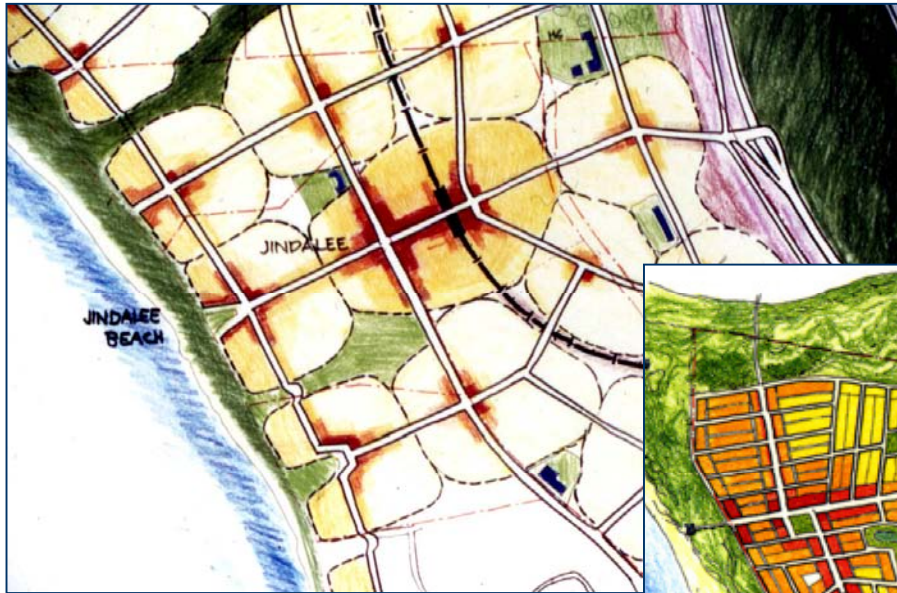Rail along Freeway, on edge of urban corridor. National Park to east

Scenario B
Rail part way into urban corridor, along Connelly Drive

Scenario C
Preferred Rail in the centre of the urban corridor

Regional Structuring Examples:
Jindalee Town and Neighbourhood Structure

Testing by design at the more detailed scale, then re-adjusting the regional structure as necessary

Regional Structuring Examples:
Jindalee Town and Neighbourhood Structure
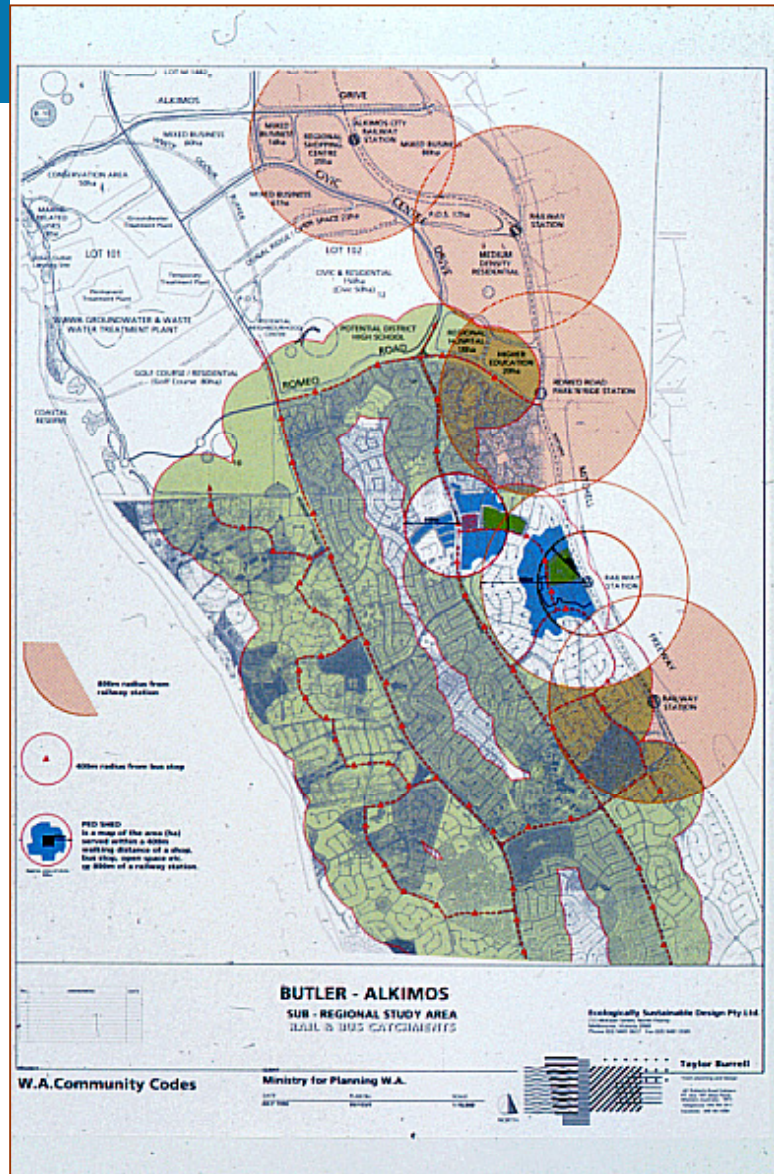
Improving Walkability to Centres
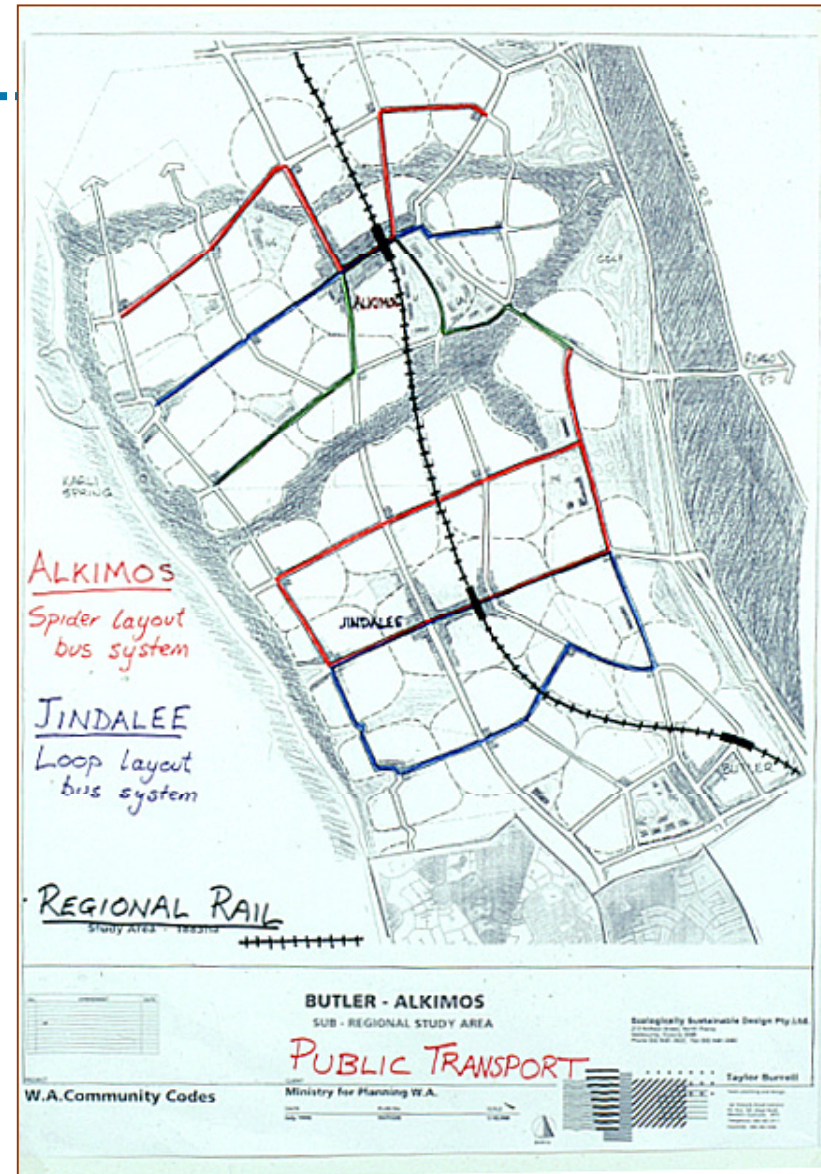

Conventional - centre pedsheds

Liveable Neighbourhoods - centre pedsheds
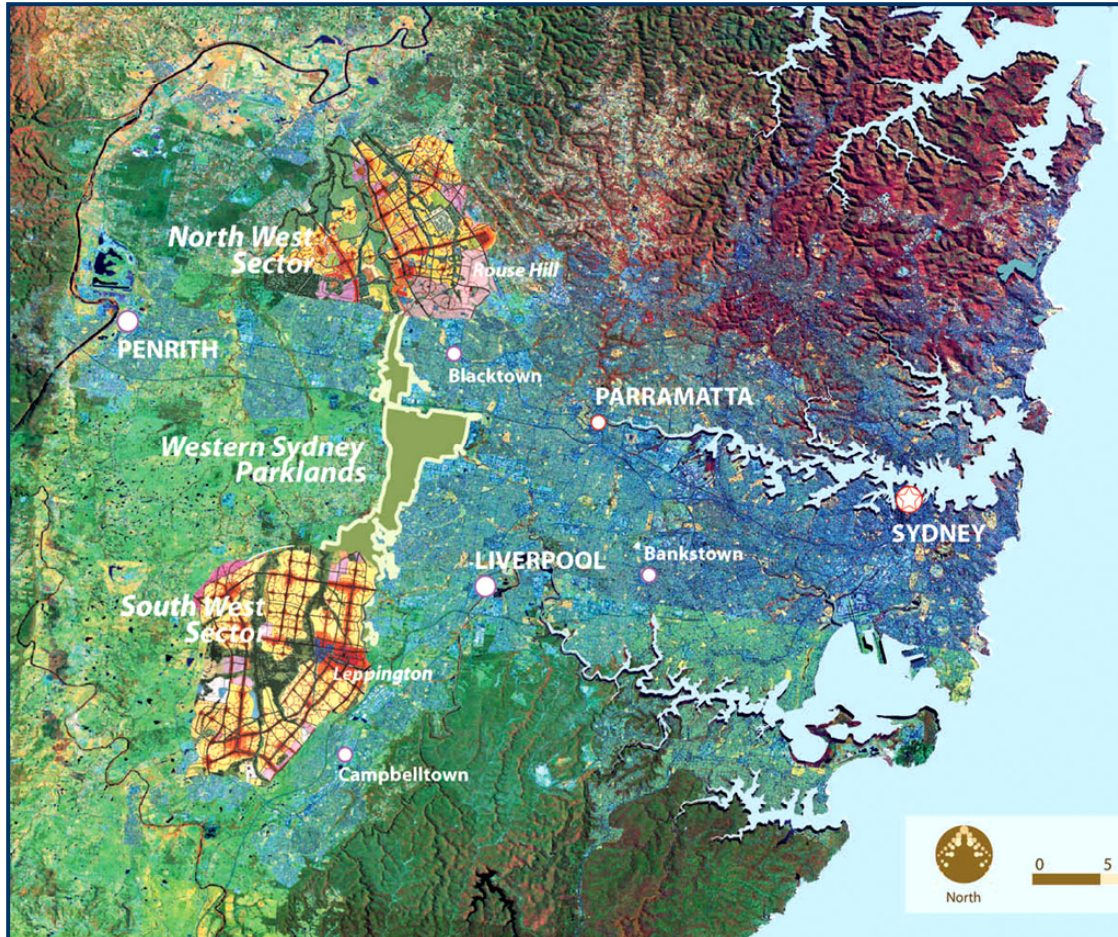
Measuring rail and bus catchments

Conventional – routes and catchments

**Liveable Neighbourhoods - routes and catchments**

# Regional Structuring Examples: Western Sydney Urban Land Release 2003-05

Two main remaining large **Growth Areas** totaling 26,000ha in the Sydney Basin, population 380,000

Regional Structuring Examples:
South West Sydney – Urban Structuring

Consolidate and enhance key **viable habitat fragments**, remove others.
Investigate spacing and linking of Town Catchments. Green network
generally located **between towns**, **not between neighbourhoods**

Preliminary urban/green

Preliminary town locations
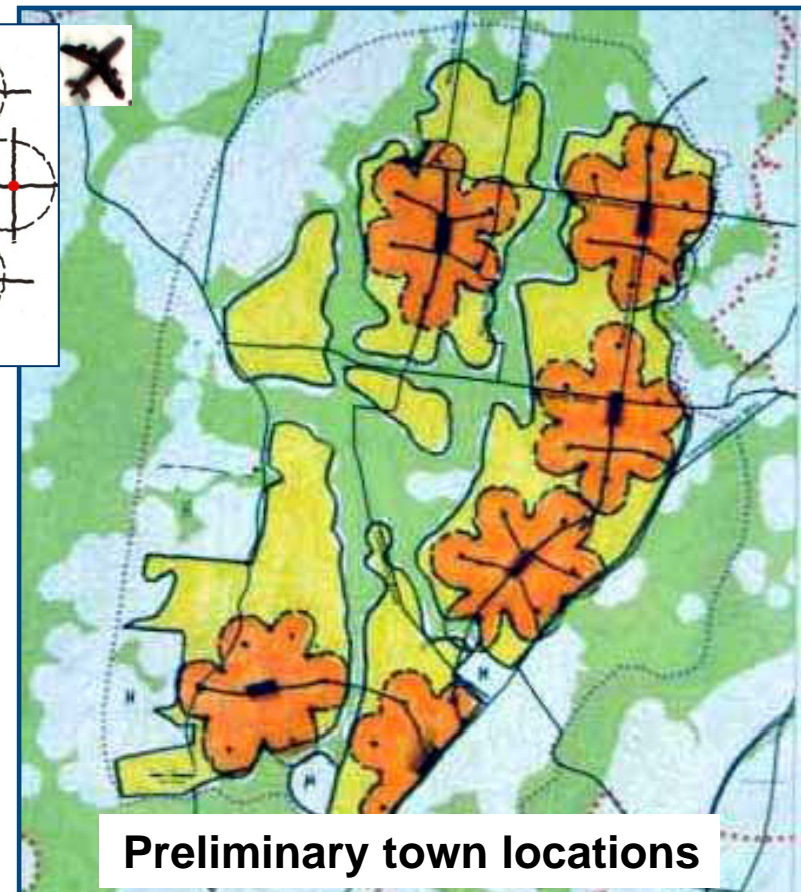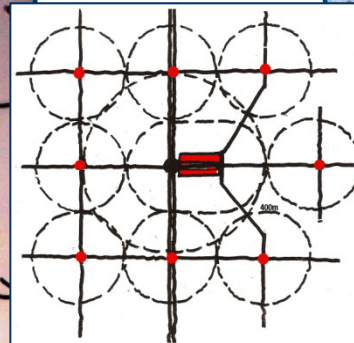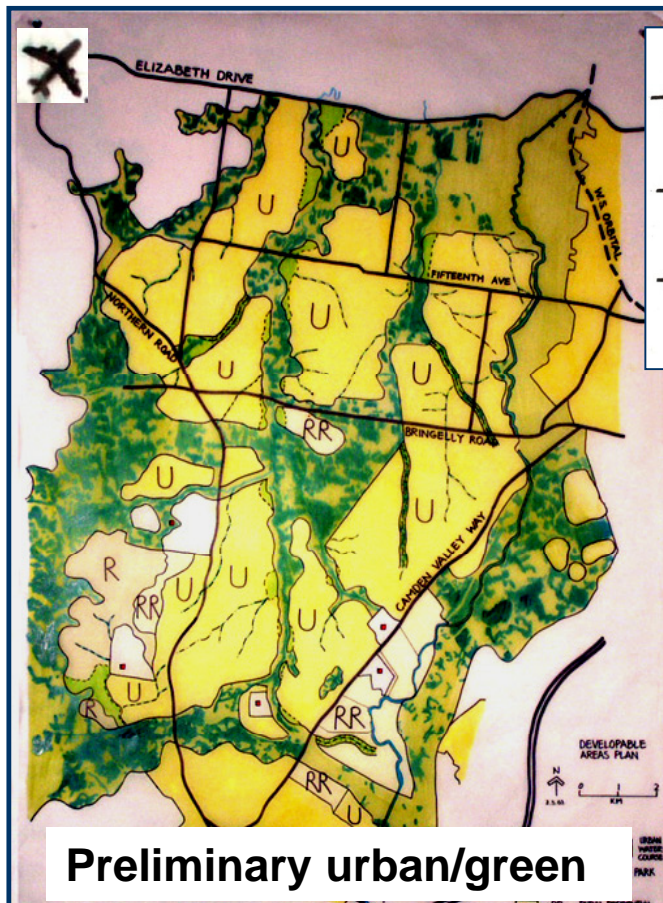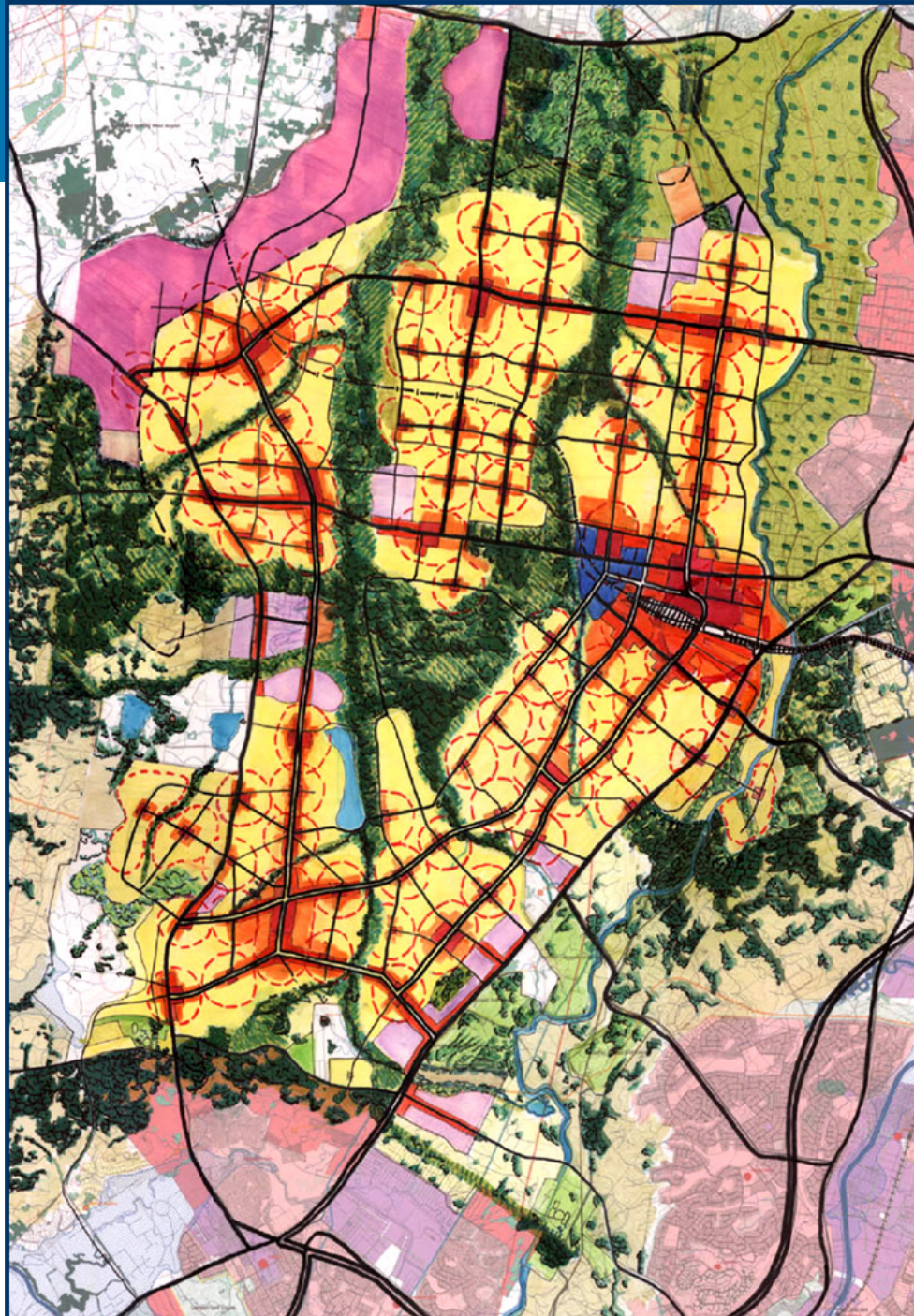
South West Sydney Final Adopted Plan

Rail to Leppington - **a new Regional Centre**

Bus transit boulevards to five town centres.

Walkable neighbourhoods with local centres and bus routes on local arterials

Green network and heritage farms between towns

Retail complementary instead of predatory

Part 3

The New Urbanist Debate: Diagram Slap Down

All Circles ≠ Town

CORRIDOR DENSITY: NECESSARY TO FREE PEOPLE FROM AUTOMOBILE DEPENDENCE. MIN 7 DWELLING UNITS PER ACRE (DU/A) TO SUPPORT BASIC BUS SERVICE HIGHER PREFERRED FOR BETTER SERVICE & MODE (15 DU/A TROLLEY) 22 DU/A LIGHT RAIL

CORRIDOR LAND USE MIX: TO ACHIEVE A 1:1 JOB - HOUSING BALANCE
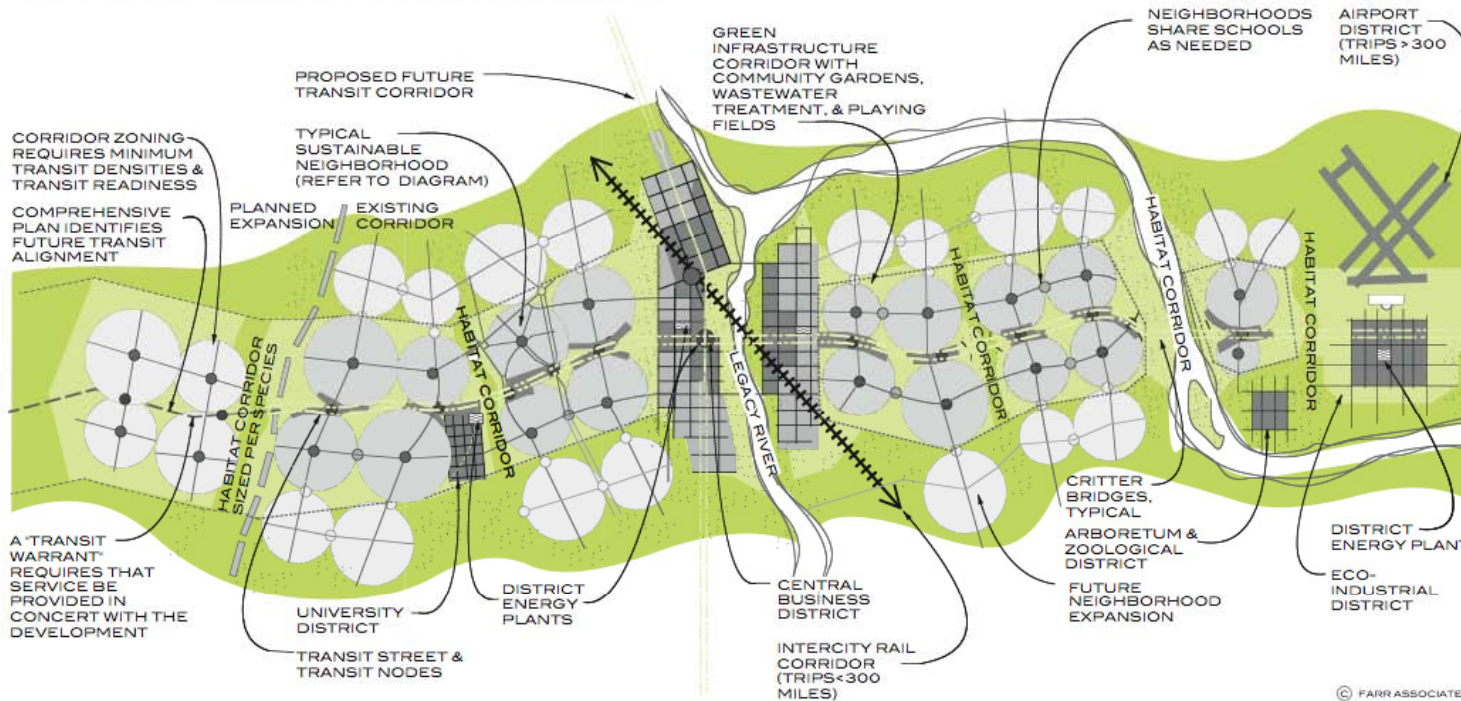
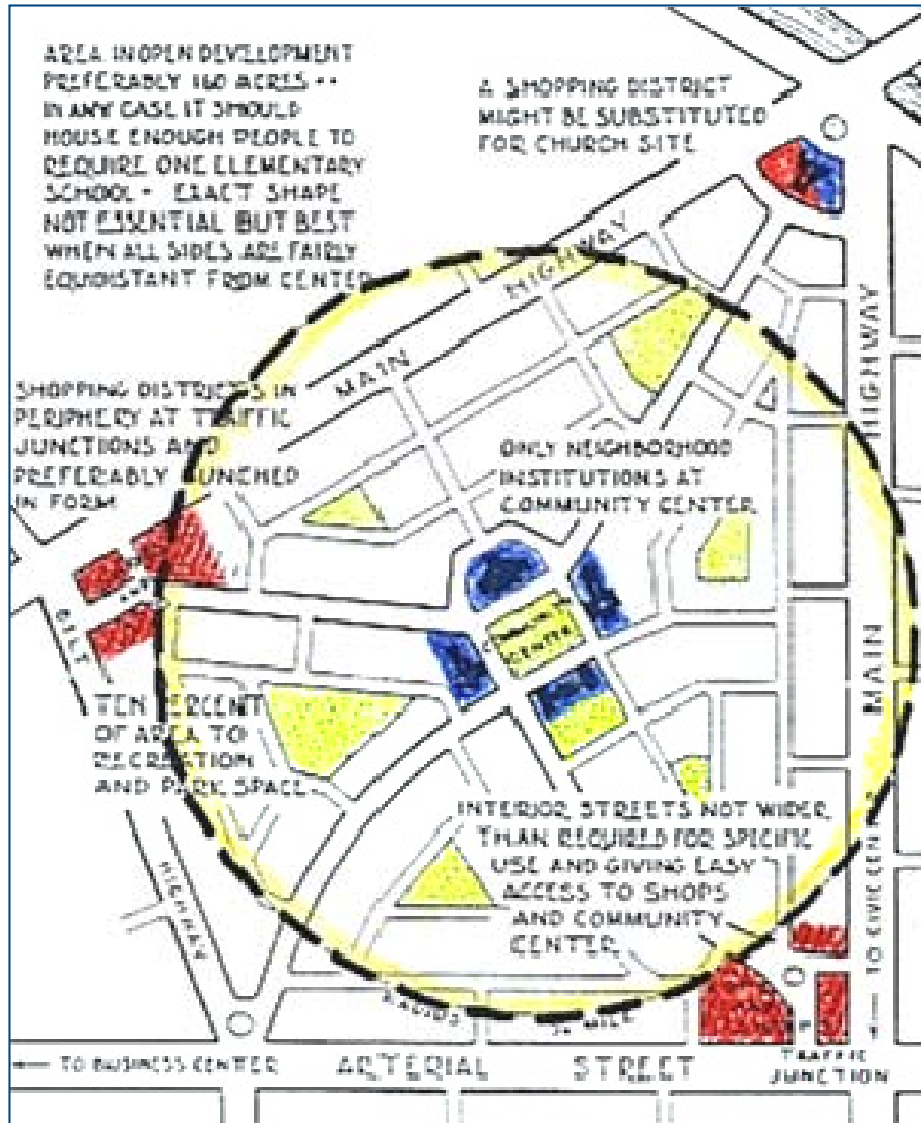A SUSTAINABLE CORRIDOR (BUILDING BLOCKS OF A SUSTAINABLE REGION)

✓ Landscape scaled approach with habitat corridors between urbanism

X Transit corridor **bypasses** neighborhood centers

X Only one city/town center

X Remainder is **unstructured**

The Perry Diagram

"It is no coincidence that Clarence Perry retreated to the centre, in a relatively isolationist, exclusive and defensive fashion, separating social institutions from the life of commerce which he kept on the edge. Oh, and by the way, he blew away Main Street in one fell swoop."

Paul Murrain

Traditional Neighbourhood Structure
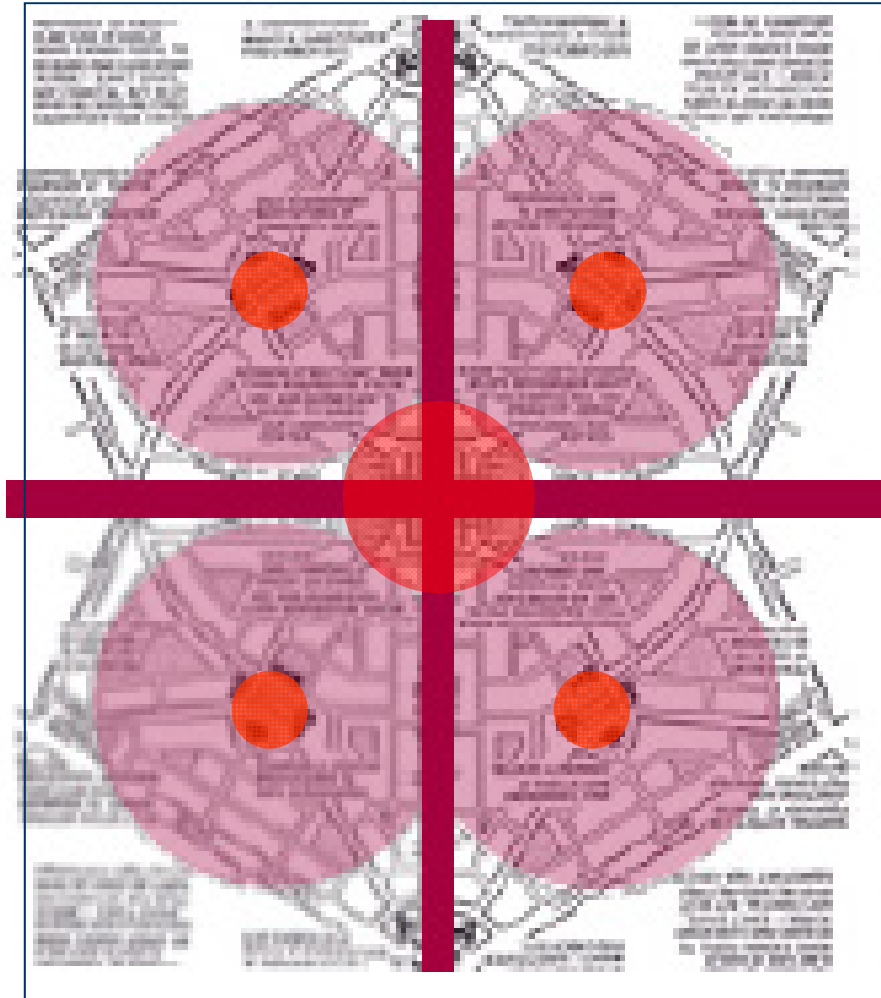
Perry is now interpreted through **TND**, with a cluster of four Perry Neighbourhood Units.

- **Local retail internalised** away from the movement economy and **town centres artificially externalized**

- Neighbourhood Centres are only a 400 metres from the Town Centre - **too close to complement each other** with neighbourhood centres usually failing
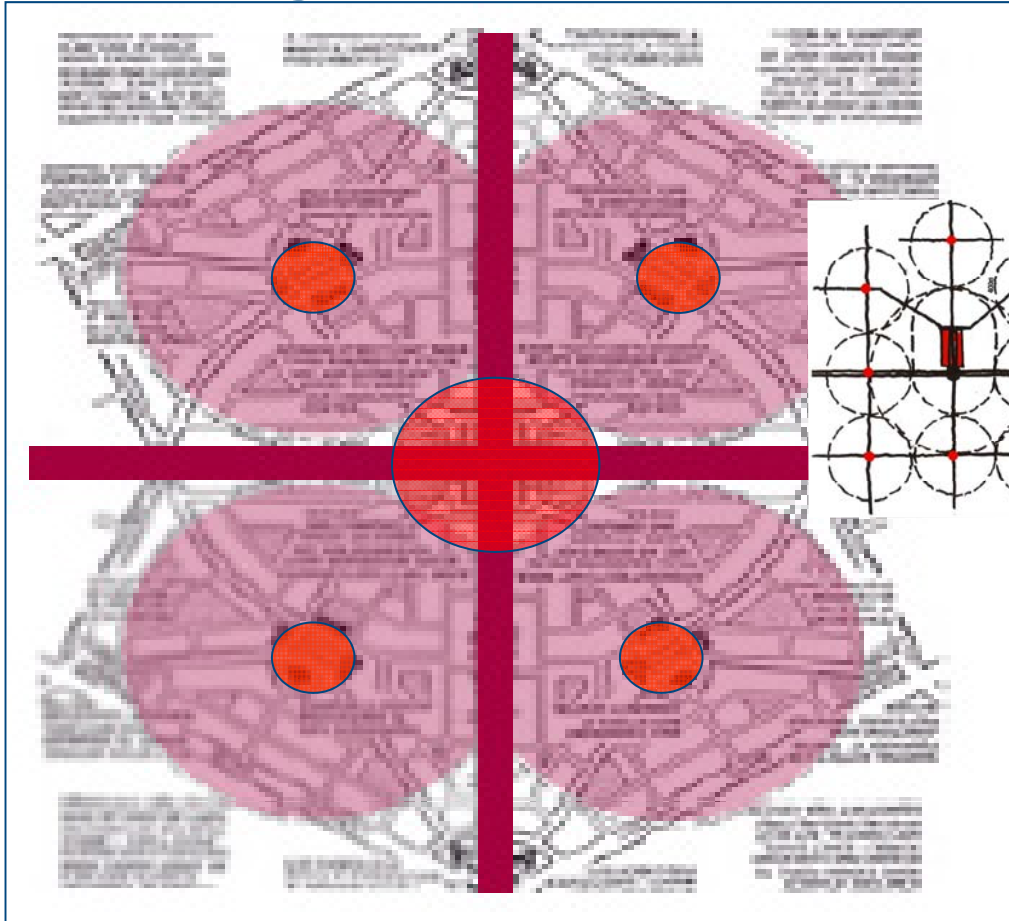
Relative performance: Public Transport
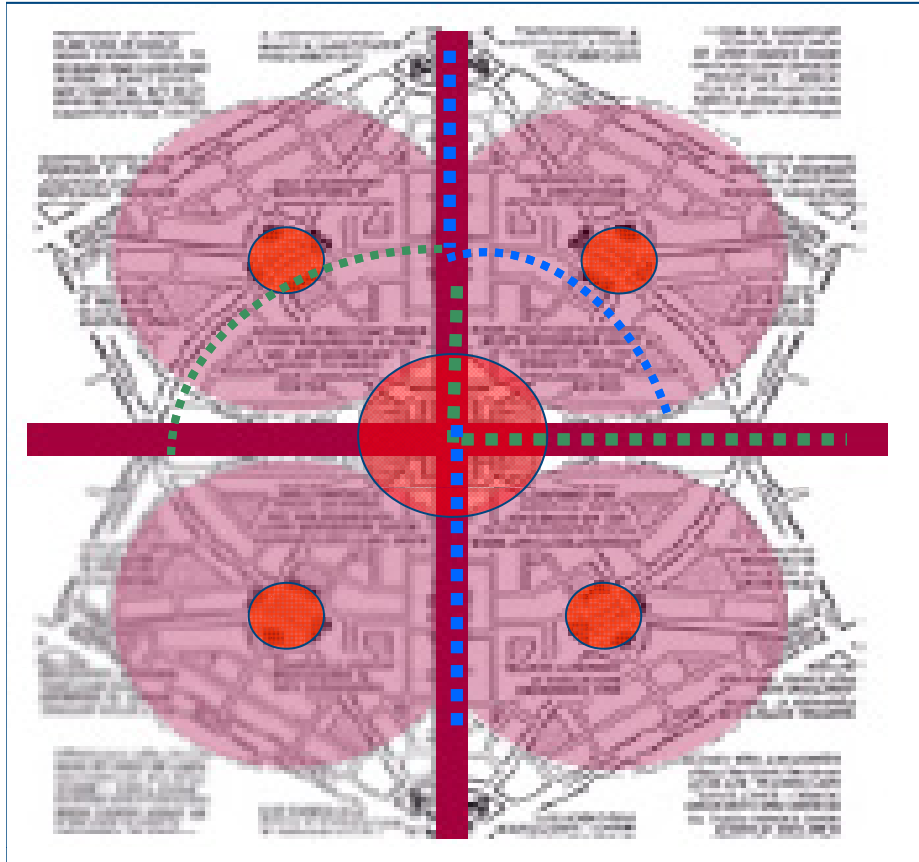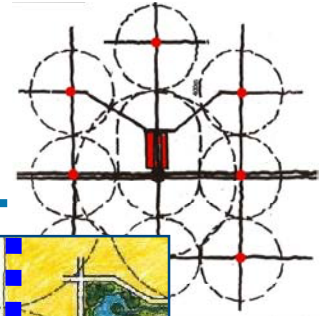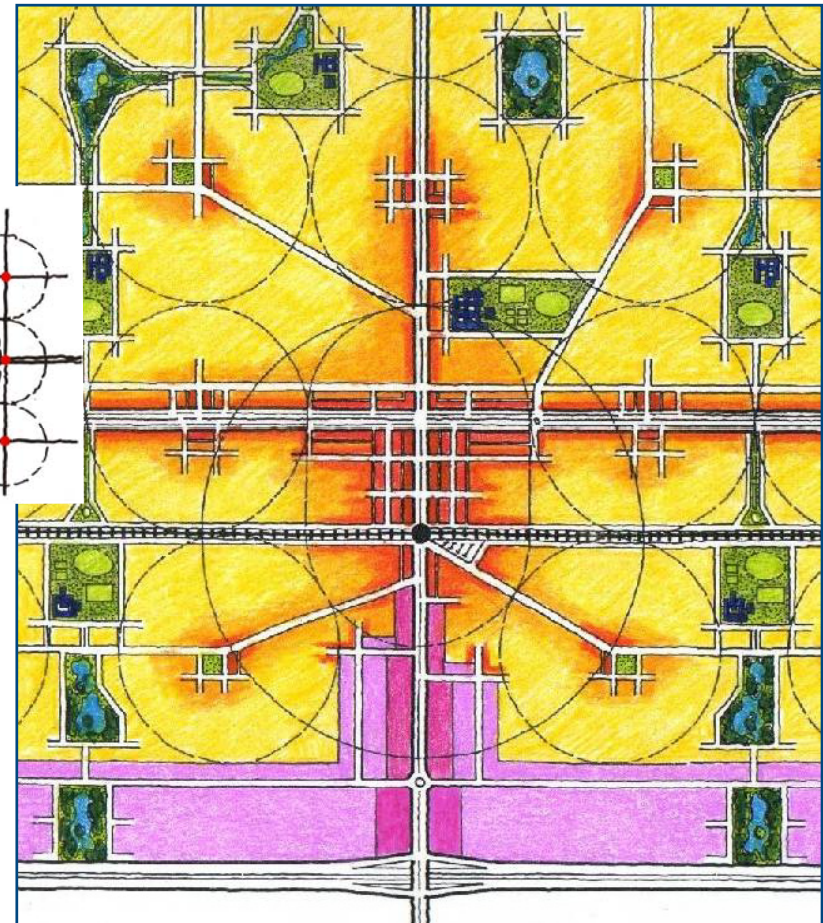

Routing Problem!
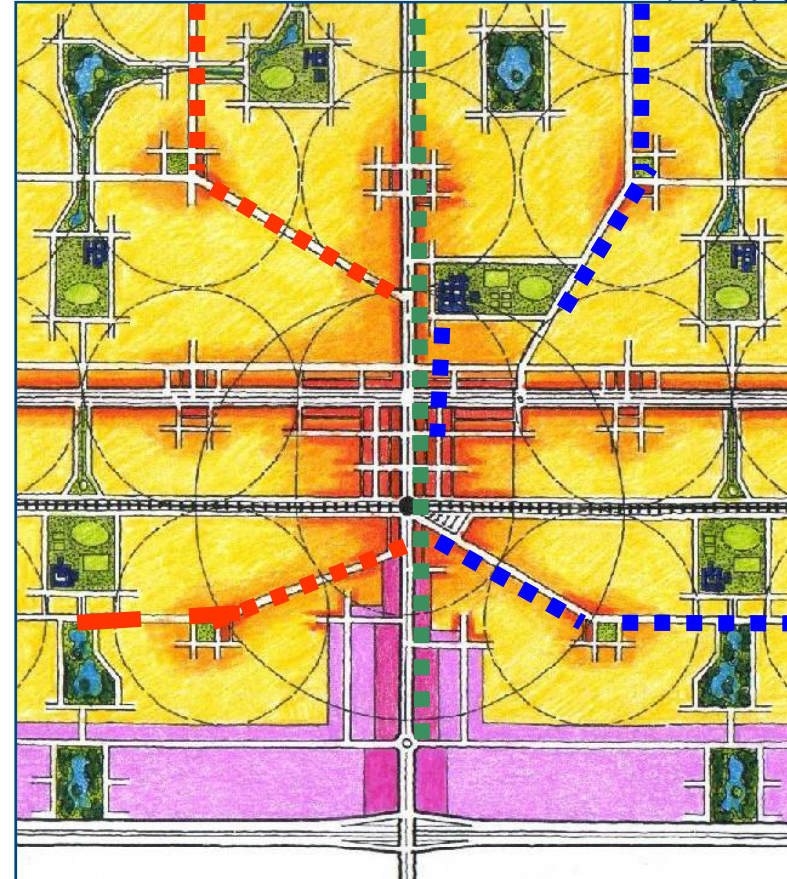
Heavy Rail with Feeder Buses

Relative Performance: Centres

4 neighborhoods
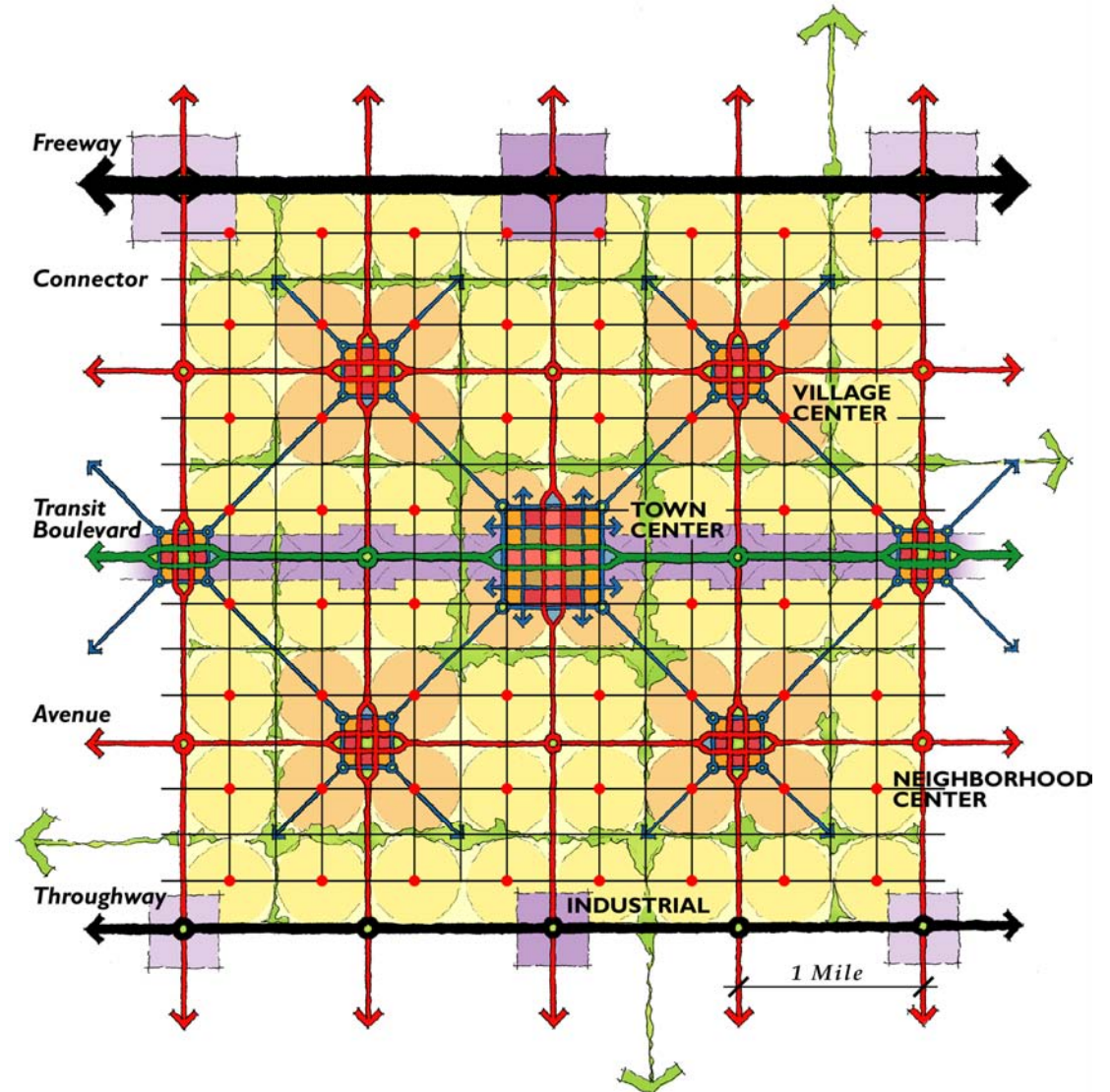
8-9 neighborhoods

Retail Performance: Twice the capacity

Regional Structuring Proposals

The Urban Network/Regional Transportation Structure - Calthorpe

This network **isolates neighbourhood centres** from the Movement Economy and locates town centres without catchments

Part 4

7 TAKE-AWAY MESSAGES
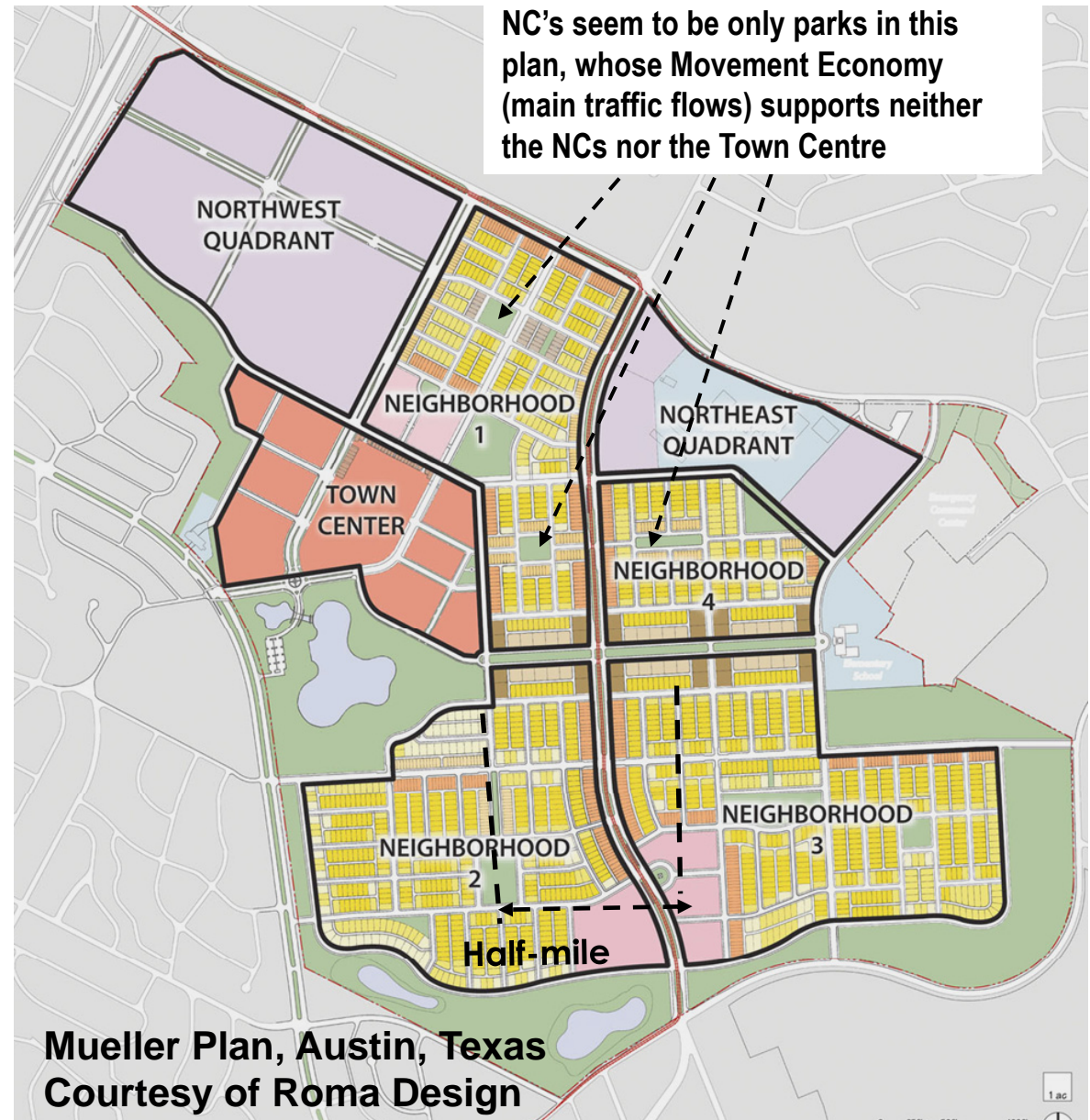
1. Plan for Context – Whatever the Project Scale

2. Avoid Squeezing Development Like 'Toothpaste' Between Constraints

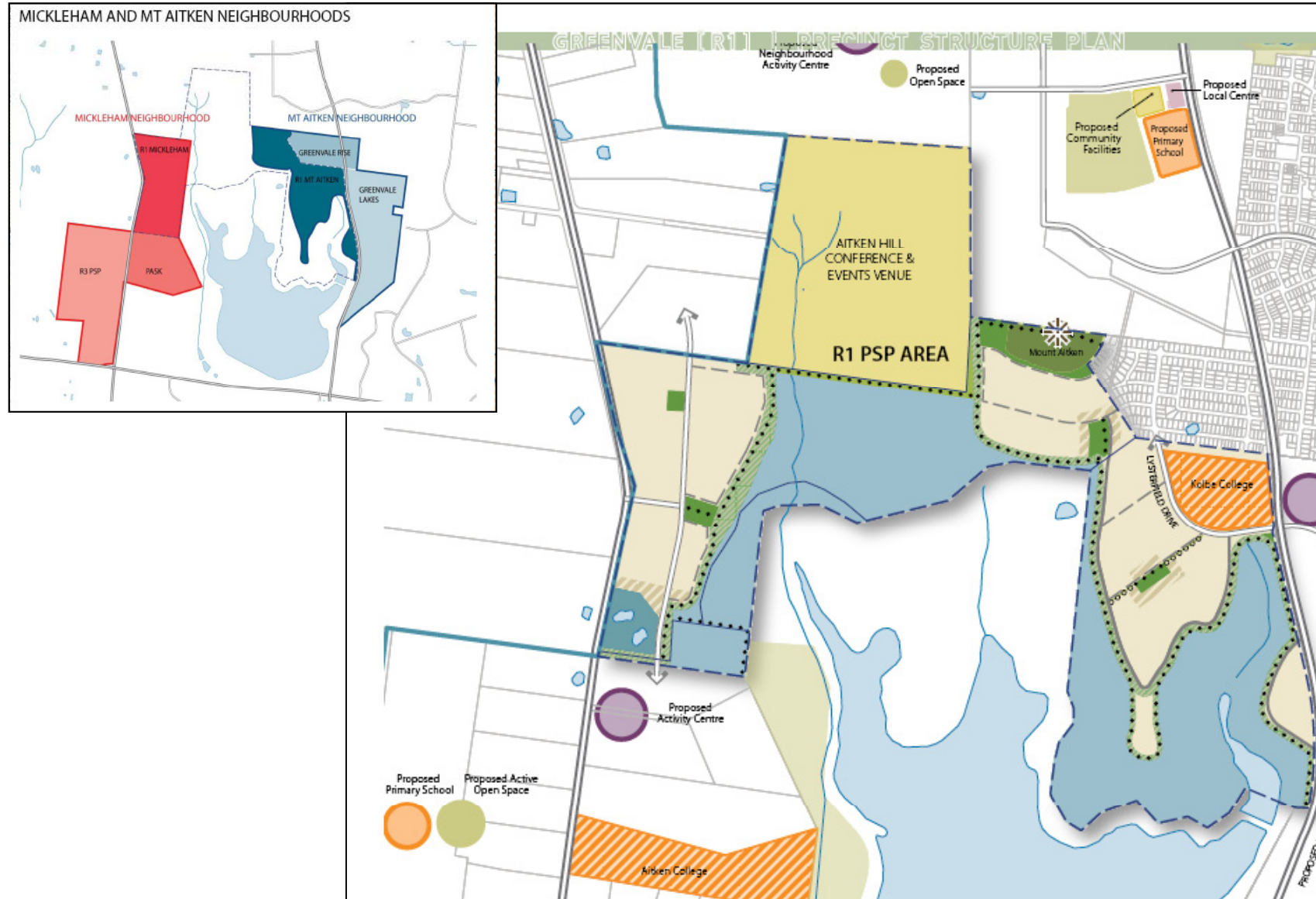This severely **compromises** ecological and urban outcomes

….the **worst of all** possible outcomes

3. Interconnected is <u>not</u> necessarily integrated urbanism

NC's seem to be only parks in this plan, whose Movement Economy (main traffic flows) supports neither the NCs nor the Town Centre

NORTHWEST QUADRANT

NEIGHBORHOOD 1

NORTHEAST QUADRANT

TOWN CENTER

NEIGHBORHOOD 4

NEIGHBORHOOD 2

NEIGHBORHOOD 3

Half-mile

Mueller Plan, Austin, Texas
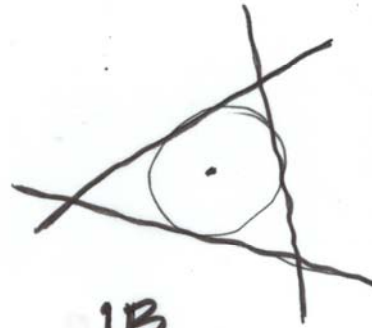**Courtesy of Roma Design**
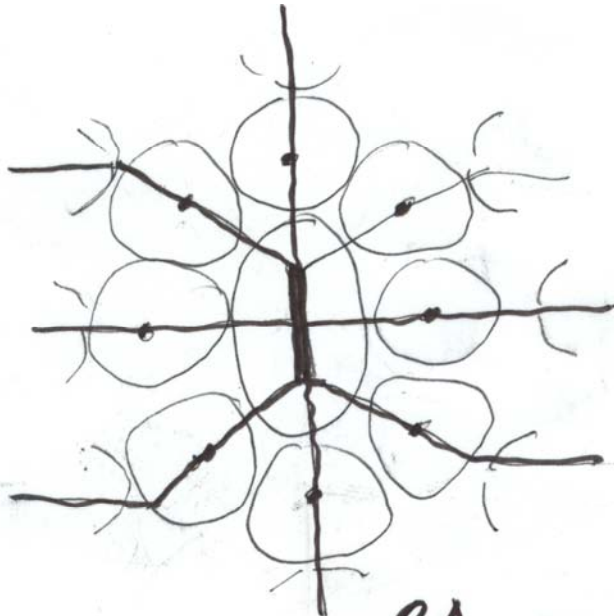
4. Words reduced diagrams – no indication of urban structure or intentions

5. All circles are not the same
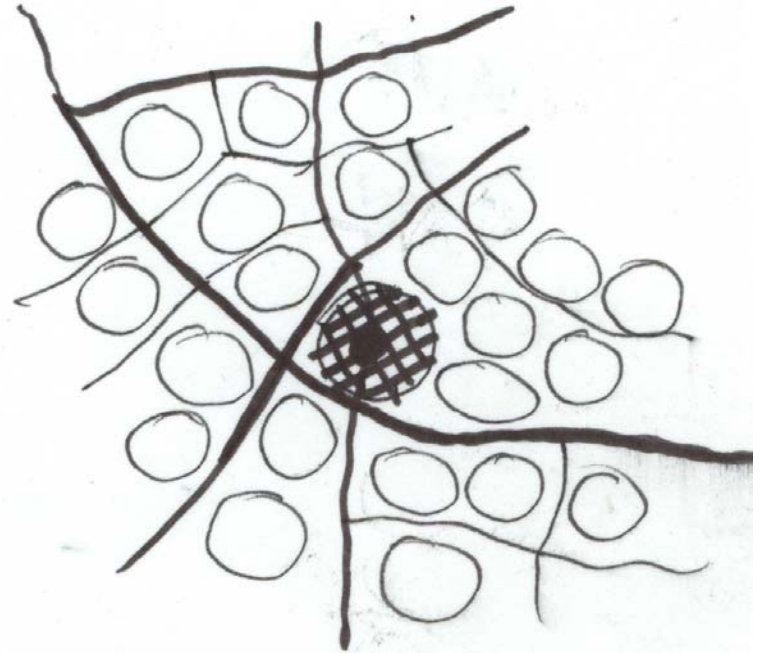

1A   1B
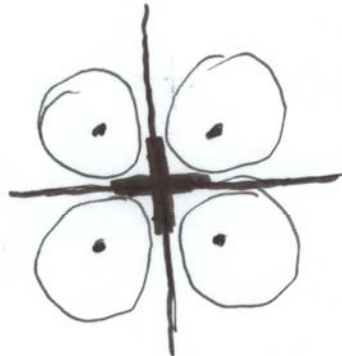
2A   2B   3

6. Do <u>not</u> attempt this on your own!

7. Delivery – a dimension beyond urban design

CONVENTIONAL (Sprawl)	NEW URBANISM (Project level)	SUSTAINABLE GROWTH MANAGEMENT
Still in many Local Government Codes	**New Urban and Transport Coding available**	**Right Model + Planning Regulation, Governance, Infrastructure & Finance Mechanisms**

Conclusions

▸ **Walkable Neighborhoods** are a fundamental component of sustainable urbanism, but how we structure them together will ultimately determine the effectiveness of The New Urbanism in Australia

▸ We need

- An **agreed Australian model**

- Reliable methods for **large-scale implementation**

- A **single** and **coherent message** for other sectors and professions