



*MELBOURNE UNIVERSITY*

# New Urbanism

## An Overview and Australian Examples

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# What is New Urbanism?

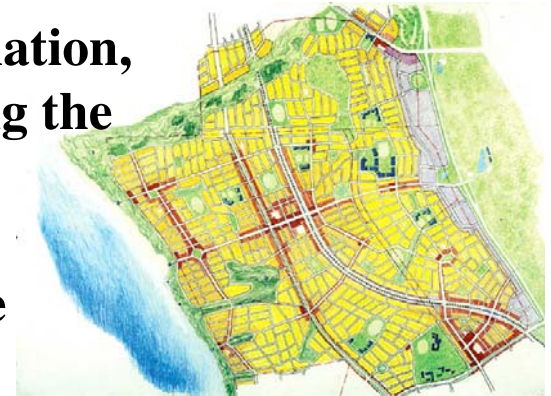
... a built environment which is diverse in use and population, scaled for the pedestrian, and capable of accommodating the automobile and mass transit...

... a well-defined public realm which is responsive to site features and ecology, and supported by an architecture reflecting the climate and culture of the region...

... fine-grained mixed use town and neighbourhood centres with a variety of higher density housing in proximity....

... a highly-interconnected street network, with sophisticated traffic management to provide safety and comfort for pedestrians, cyclists and transit-users....

...when applied at the regional, as well as local scale, provides a basis for comprehensive sustainable growth management



# New Urbanism

*....Initially A Reaction to Sprawl*

*.....Now A Basis for Sustainable Urban Growth/Smart Growth*

*.....and a response to Climate Change and Peak Oil*

*...and a Basis for Addressing Physical Health and Social Well-being*

**New Urbanist principles are now embedded in all major Australian growth management strategies eg. Melbourne 2030, Perth Network City, Sydney Metropolitan Strategy, SEQ Regional Plan**



# Origins & Evolution of New Urbanism

TRADITIONAL  
NEIGHBOURHOOD  
DEVELOPMENT

TRANSIT-ORIENTED  
DEVELOPMENT

URBAN VILLAGES

RESPONSIVE  
ENVIRONMENTS

MIXED USE  
DEVELOPMENT

*SMART GROWTH*

**NEW URBANISM**

**Environmentalism**

**SUSTAINABLE  
URBANISM**



## Origin Of New Urbanism

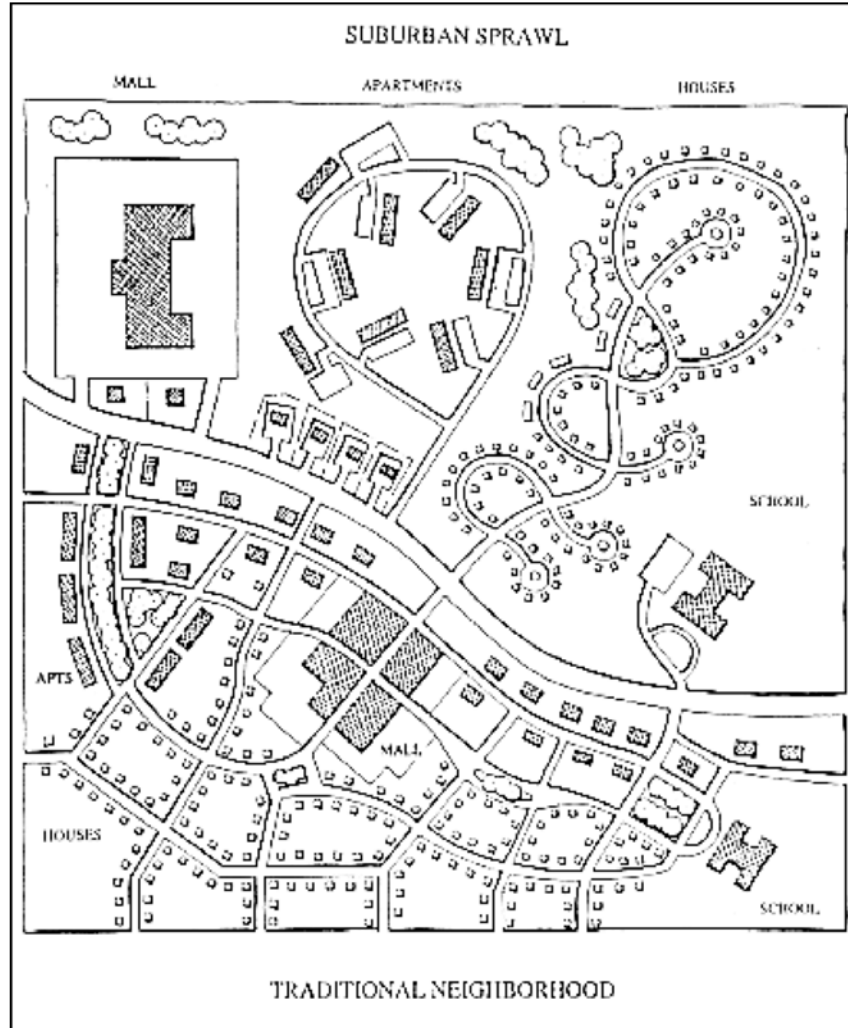
- *Initiated in 1991-92 in California*
- *Need for a coalition of design practitioners to increase effectiveness against sprawl*
- *Need to share professional knowledge, experiences and provide mutual support*
- *Need to define shared values and principles*

The Congress For the New Urbanism (CNU) was established in 1993 as an alliance of like-minded professionals. The first CNU Congress was held in Alexandria, USA, in 1992.



# Contrasting Urban Forms

Suburban sprawl v traditional urbanism - one very poor for sustainability, community, walkability, physical activity and health...the other much better...



Conventional suburban development /sprawl vs traditional urban form



Real life case - Mandurah in WA!

# Contrasting Urban Forms

## Town Centre Form, walkability and community



### **Car-orientated shopping centre**

Drive-to facilities

No pedestrian links to residential

Surrounded by sea of car parking

Poor public transport interconnectivity



### **Pedestrian-based town centre**

Walk-to and drive-to facility

Good public transport access - rail and bus

Active main street shopping strip

Big Box supermarkets sleeved in behind active street

## Shopping Environment for social interaction



### **Big-Box surrounded by car parking**

'Moat' of car parking prevents good walkability to retail services

Primarily a car destination

Hard to create a sense of community



### **Traditional Main Street**

Provisions for both pedestrian and car accessibility

Open air, attractive and active streets

Belongs to the community



## Streetscape amenity and detailing



### Wide local access road

High vehicle speeds

Poor pedestrian safety and amenity

Lack of street lighting and shade trees

Large intersection radii

Often has no footpaths, or just one narrow one



### Traditional street

Slow traffic speeds created by on-street parking

Great pedestrian amenity- footpaths on both side of street, good street lighting, and tree shade

**Residential Street  
interface**



**Friendly, walkable,  
attractive and  
interactive**

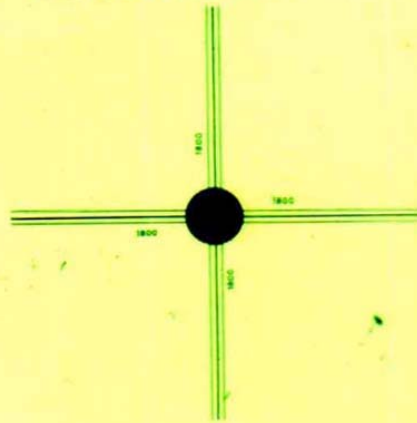
**Or**

**Blankness of garages, no  
surveillance, footpaths**

Figure 5  
TURNING MOVEMENT CAPACITY

**150 vph**

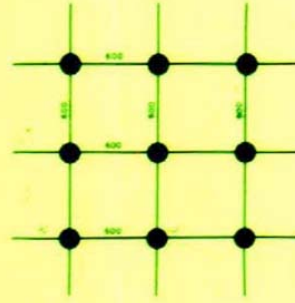
Turning Movement Capacity: 150 vph



A. Single Large Intersection

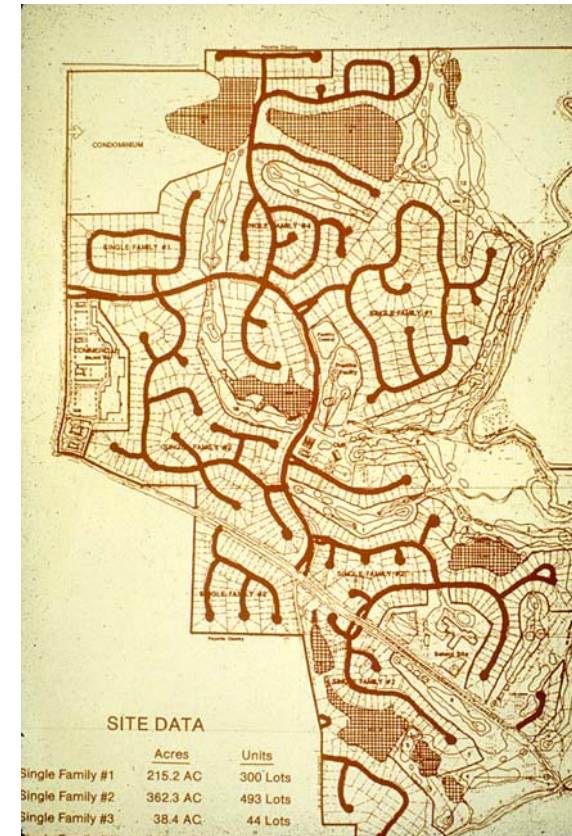
**1350 vph**

Turning Movement Capacity: 1350 vph



B. Gridded Network

## Congestion & Vehicle Km travelled



### GREENHOUSE NEIGHBOURHOOD PROJECT

#### Results: Transport energy use emissions

Neighbourhood Type	CO <sub>2</sub> emissions (tonnes/dwg/annum)	% reduction compared with Conventional
CONVENTIONAL	3.3	-
VICCODE	2.2	33%
TRADITIONAL	1.4	57%

Estimated annual transport related greenhouse emissions per dwelling (tonnes CO<sub>2</sub>)

# The Public Realm, safety, interest and interaction



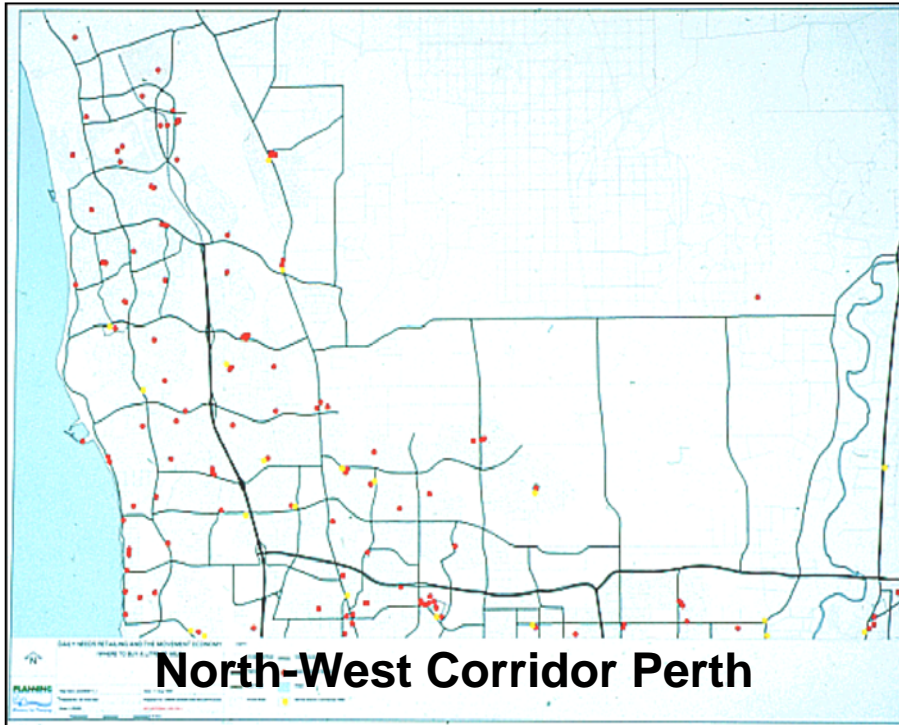
How can we build a vibrant community without social contact?



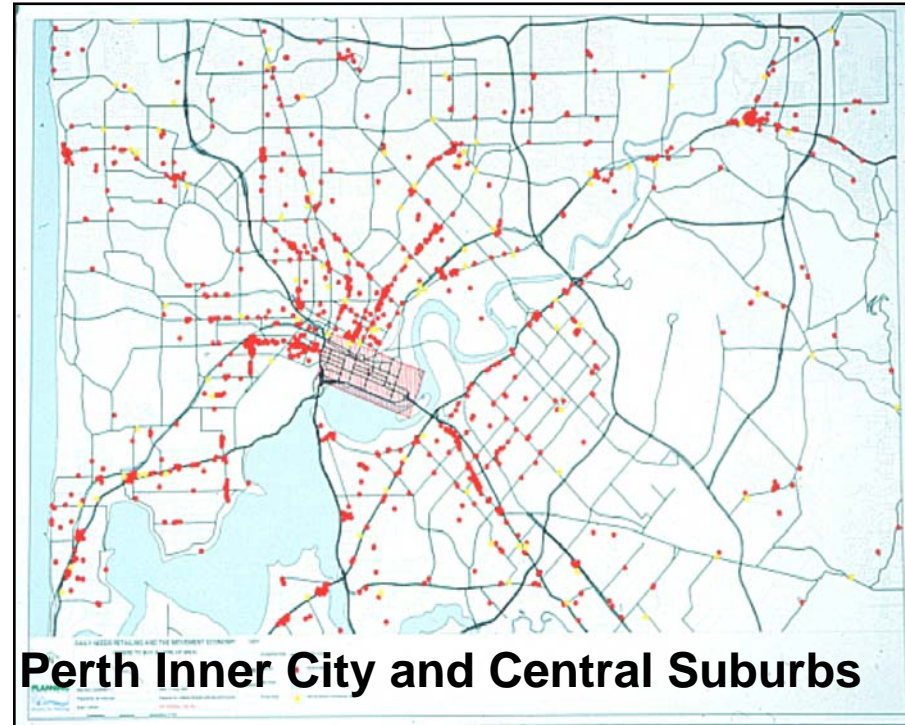
# Equity through Access - The decline of the corner store

## The Litre of Milk Maps - a reason to walk?

Conventional/sprawl Suburbs



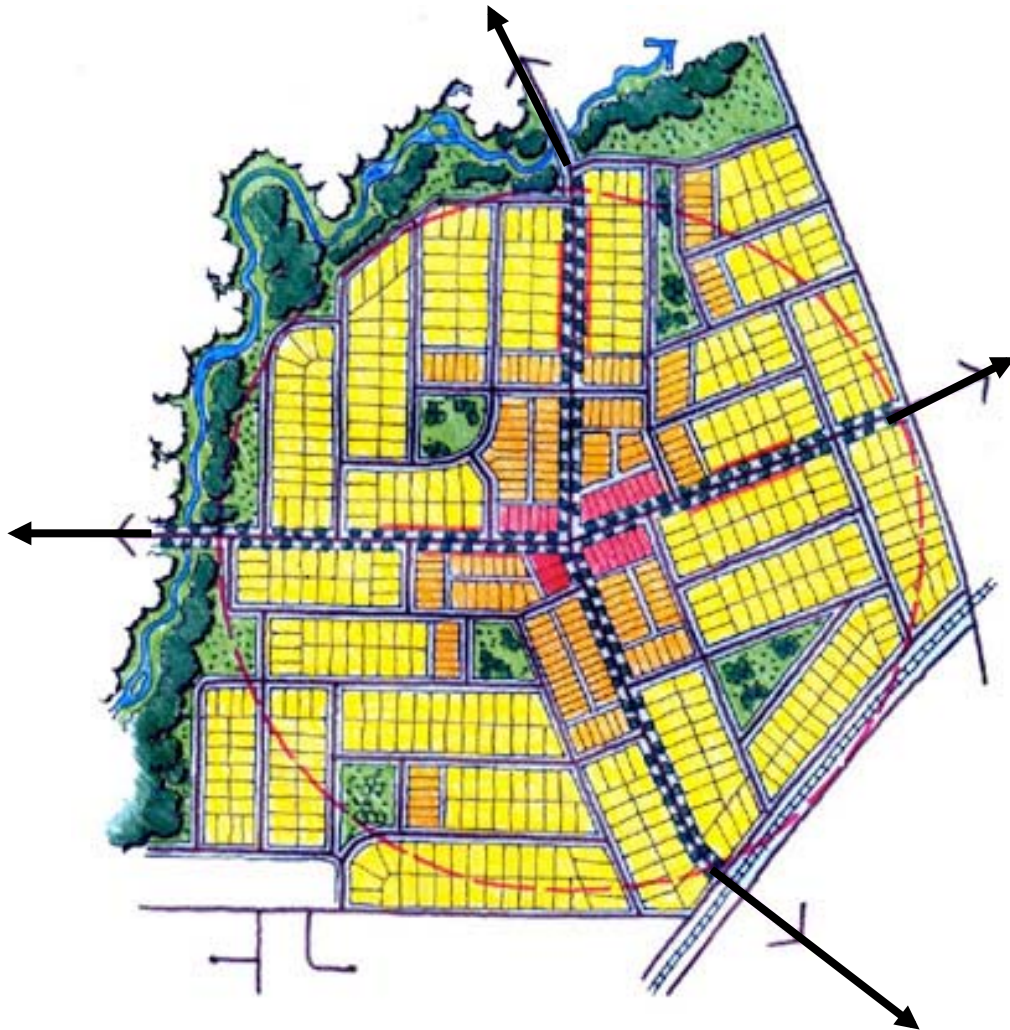
Traditional 'grid' street Suburbs



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

*Buy a litre of milk within walking distance*

## The Basic Element of New Urbanism - A Walkable Neighbourhood



A corner store, child care centre, post box, bus stop and several small businesses provide a walkable focus for a local community, together with diversity in housing choice.

400 metres walkable radius

To support retail, the centre must be on through streets with at least 3000adt on them, and serve 750-1000 dwellings. Corner stores are typically very small (150sqm), and preferably combined with a multi-generational dwelling.

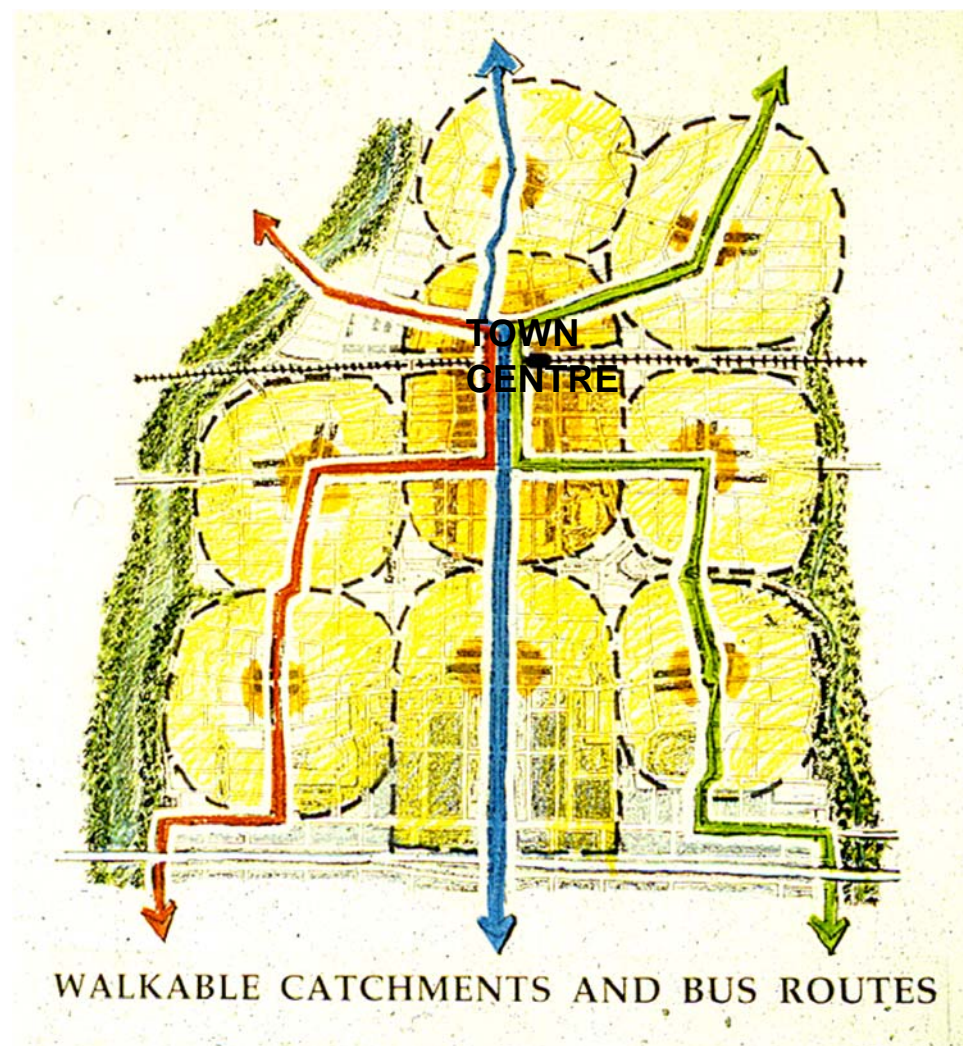
## Walkable Neighbourhoods clustering together to form relatively self-contained Towns

Typically the mixed use town centre serves around 15,000 to 30,000 people, and is supported by six to nine neighbourhoods.

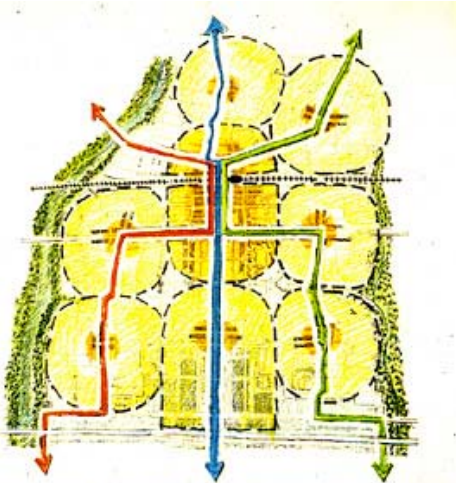
It contains a main-street based convenience retail node ideally with two supermarkets, together with service businesses, commercial uses, civic and recreational facilities.

Train and bus services serve the town and neighbourhoods.

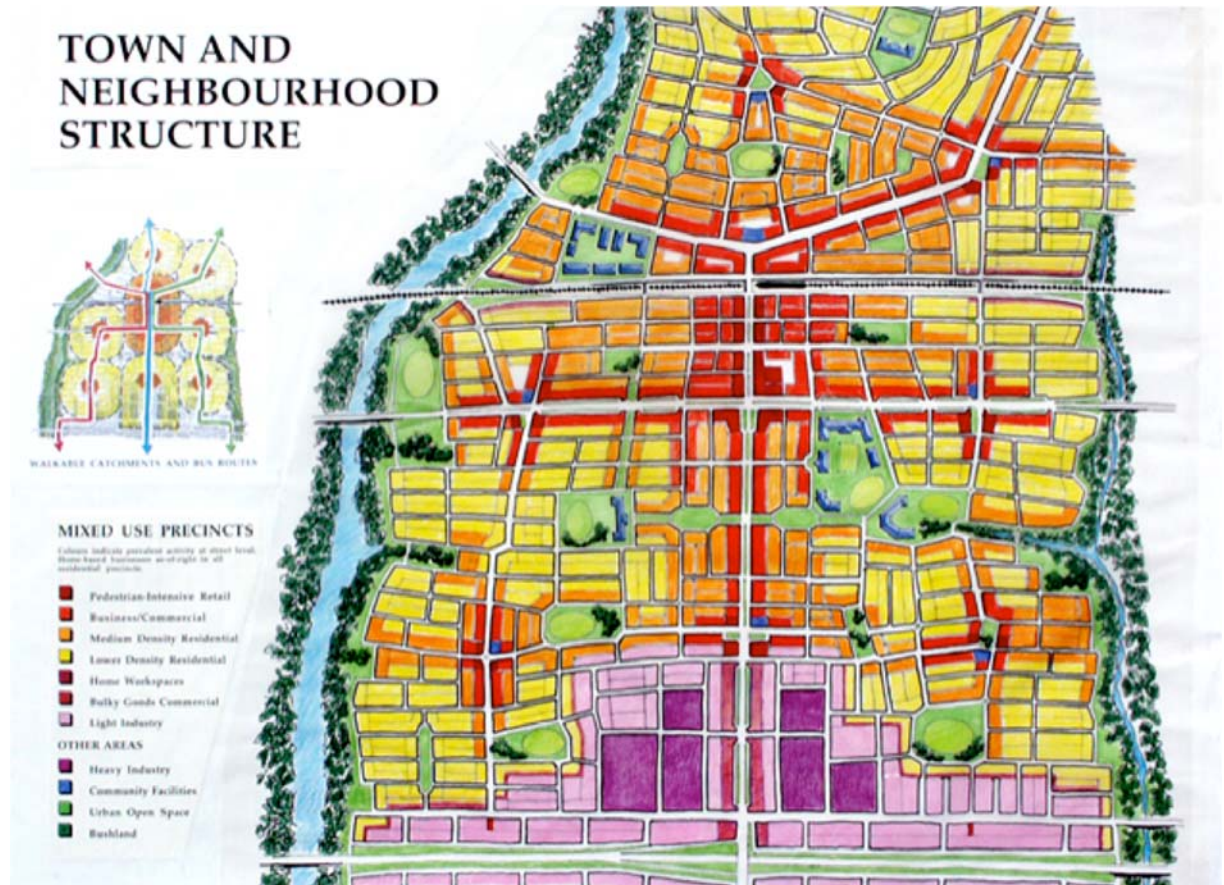
Ideally the green network locates between town catchments, not within the town.



# Detailing up a Town and Neighbourhood Structure

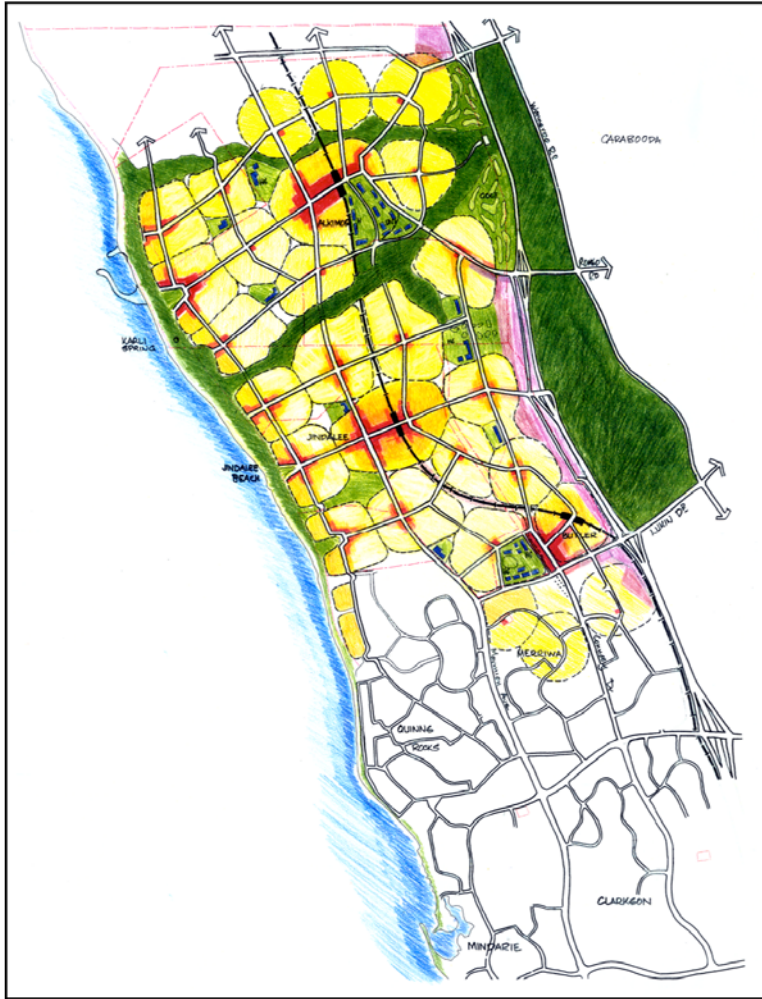


- Arterial Road Network
- Neighbourhood Connectors
- Street Network & Ped-sheds
- Locating key land uses
- Protecting heritage & environmental assets
- Providing for parklands
- Confirming bus/transit routes
- Capitalising on the MOVEMENT ECONOMY
- Solar lot orientation

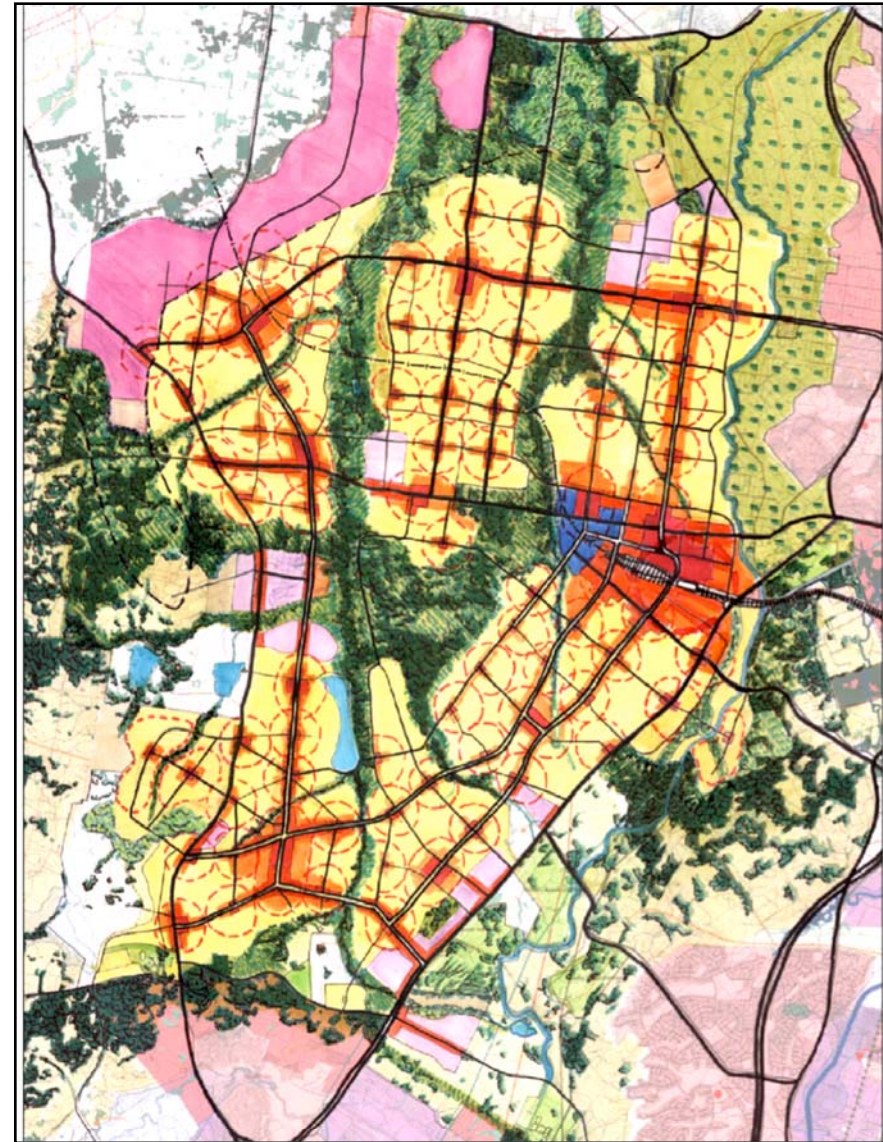




## Towns clustering into urban regions



**Perth North West Corridor  
regional structure**

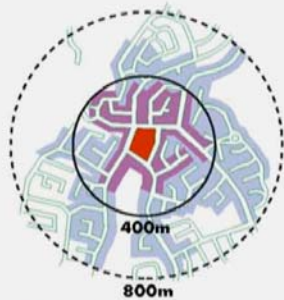


**South West Sydney Urban Release Area**

# Measuring Walkability - Pedsheds and S-A-F-E Assessment

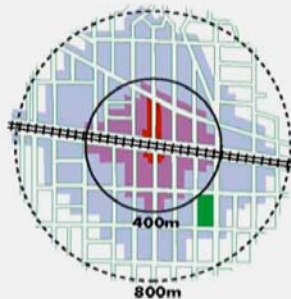
## Plan A Conventional suburban development

- 38% area is within 400m of the Shopping Centre
- 41% area is within 800m of the Shopping Centre



## Plan B Traditional neighbourhood design

- 60% area is within 400m of the Neighbourhood Centre
- 58% area is within 800m of the Neighbourhood Centre



The traditional neighbourhood design of Plan B is more effective and efficient in terms of capturing a larger land area, and a greater number of people within a 400m and 800m walking distance of the destination.

The street networks of New Urbanism designs deliver similar benefits over conventional suburban development.

**Ped-sheds. ... How far will most of us walk? Maximum five to ten minute walk (400 to 800 metres) to destination or to public transport stop. Not very far!**

**Safe pedestrian routes - regarding both traffic and personal security.**

**Attractive routes with interesting streets, destinations, activities to see, shady trees.**

**Friendly routes - with footpaths, kerb ramps, and lights -controlled crossings at busy roads.**

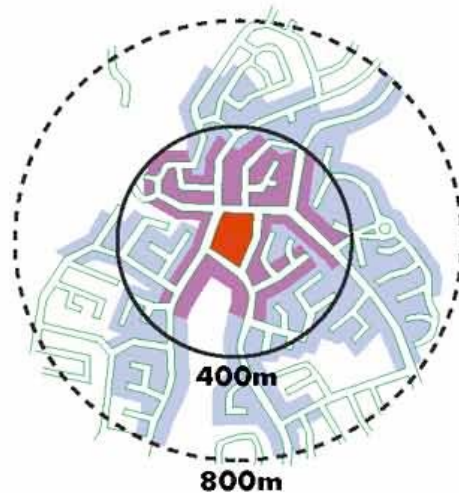
**Efficient and direct routes - ('Pedshed' mapping) - routes are much more direct in well-connected street layouts.**



# Ped-Shed Mapping

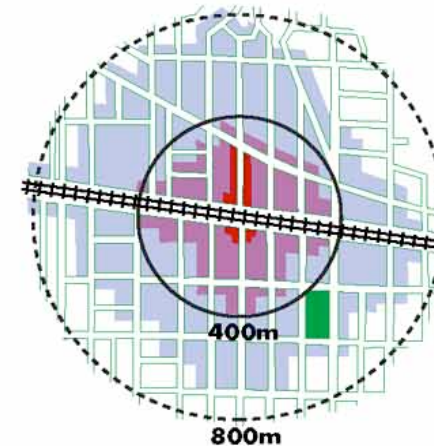
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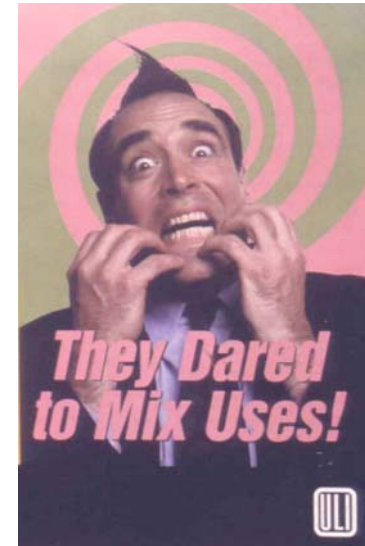


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# Mixed Use is vital for Walkability

Doubling the accessible land use mix within a 1 km radius of a household quadrupled the walking activity for that household



The average household with a low land use mix of 0.15 had **18** non-residential destinations within 1 km.....

....whereas the average household with a high land use mix of 0.30 had **67** non-residential destinations in its 1 kilometre buffer; and commercial destinations increased from 13 to 51 respectively.

2004 Study: Obesity Relationships with Community Design, Physical Activity, and Time Spent in Cars

Lawrence D Frank, PhD, Martin A. Anderson, MA, Thomas L. Schmid

# Australian Involvement in the Emergence of New Urbanism

Late 80's/early 90's..... Governments all exploring urban consolidation. Emerging concern about suburban sprawl. Extensive number of design workshops applying 'Responsive Environments' principles with Paul Murrain and others from Oxford, UK.....

1991.... First interface with USA TND/TOD proponents. Chip Kaufman (then with DPZ) visits for 'sprawl-busting' training program. WM and Paul Murrain (UK) attend key New Urbanism meeting in California & join in Southport (Sacramento) Charrette.

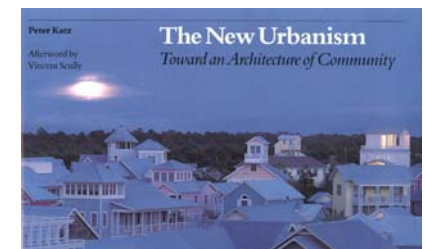
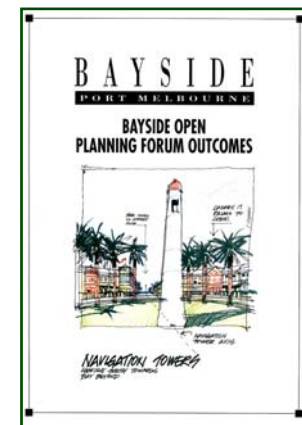
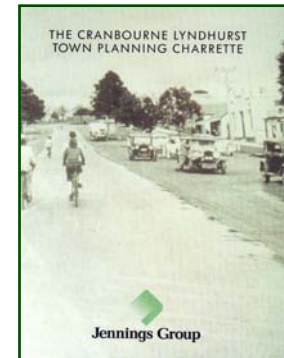
1992 .... Cranbourne Charrette (led by CK) and Bayside Charrette (led by PM) - first two charrettes - applying New Urbanist principles to both urban extension and urban infill.

1993/4.... CNU I in Alexandria USA; WM and Andrew McCutcheon (former Minister for Planning in Victoria) as active participants.

1994.... *'The New Urbanism - towards an Architecture of Community'*, by Peter Katz published in USA. Creates "White picket fence" image for New Urbanism. The CNU Charter adopted at CNU IV at Charleston, USA. Several Australians are signatories.

1995.... *'AMCORD 95'* released by Commonwealth Government, with direct reference to New Urbanist principles as a contribution to transforming suburban sprawl. Better Cities Program is key urban regeneration catalyst.

1995/96... *'Get Railed'* - national TOD principles tour featuring Peter Calthorpe as key speaker. Andres Duany & Peter Katz also visit as speakers.



# Australian Involvement in the Emergence of New Urbanism

1997.... WA Government publishes first edition of the *Liveable Neighbourhoods Code*, as an optional alternative code for urban extensions. WA is already taking a strong lead in the move away from sprawl, with several projects already under construction.

2000.... The book *'Charter of the New Urbanism'* published in USA by CNU, to explain the 27 Charter principles. WM writes on a key regional structure principle, in acknowledgement of Australia's leading work at this scale.

2001.... First *Australian and New Zealand New Urbanism Congress* held in Melbourne, over four days with 400 attendees.

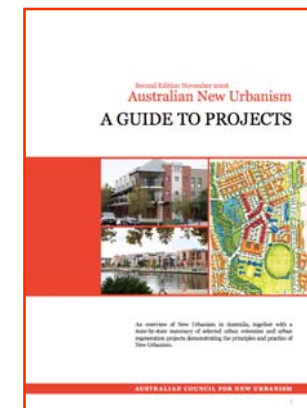
2004.... Australian Council For New Urbanism (ACNU) informally established by key New Urbanist practitioners in Australia.

2004..... Since 2001, most State Government planning agencies have adopted significant Sustainable Growth Management Strategies for Melbourne, Perth, Sydney, Brisbane.

2005.... The ACNU *Second Australian New Urbanism Congress* held in Sydney, and publication of the first edition of *'Australian New Urbanism - A Guide To Projects'*.  
The ACNU website [www.acnu.org](http://www.acnu.org) established.

2006.... ACNU formalises and runs very successful three-day bus tour of Perth projects. Second edition of *Australian New Urbanism - A Guide to Projects* published.

2008 .... February - Third ACNU Congress held in Brisbane.



## **Key Features of Australian New Urbanism relative to USA**

- **More focus on systemic urban improvement than on ‘gem’-projects**
- **Stronger planning culture**
- **Strong role of State Governments in city growth management**
- **State Government planning policies and strategies now supportive almost everywhere**
- **Strong role of Government Land Agencies and Redevelopment Authorities in most innovative projects**
- **Good inner suburbs as models, with mixed use and transit, and high property values**

