New Urbanism
An Overview and Australian Examples

Wendy Morris
Director
Ecologically Sustainable Design Pty Ltd
Melbourne, Victoria
Ph 03 9481 0637; fax 03 9481 0585
esdwendy@netspace.net.au

25th August 2008
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

SMART GROWTH

NEW URBANISM

TRADITIONAL NEIGHBOURHOOD DEVELOPMENT
TRANSIT-ORIENTED DEVELOPMENT
URBAN VILLAGES
RESPONSIVE ENVIRONMENTS
MIXED USE DEVELOPMENT

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
**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
Congestion & Vehicle Km travelled

GREENHOUSE NEIGHBOURHOOD PROJECT

Results: Transport energy use emissions

<table>
<thead>
<tr>
<th>Neighbourhood Type</th>
<th>CO₂ emissions (tonnes/dwrg/annum)</th>
<th>% reduction compared with Conventional</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONVENTIONAL</td>
<td>3.3</td>
<td>-</td>
</tr>
<tr>
<td>VICCODE</td>
<td>2.2</td>
<td>33%</td>
</tr>
<tr>
<td>TRADITIONAL</td>
<td>1.4</td>
<td>57%</td>
</tr>
</tbody>
</table>

Estimated annual transport related greenhouse emissions per dwelling (tonnes CO₂)
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

North-West Corridor Perth

Perth Inner City and Central 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 3000 adt 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

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

Plan A  Conventional suburban development
- 38% area is within 400m of the Shopping Centre
- 41% area is within 400m 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.
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
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.


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
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.


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