ACNU08

Brisbane

2008 NATIONAL CONGRESS OF THE AUSTRALIAN COUNCIL FOR NEW URBANISM

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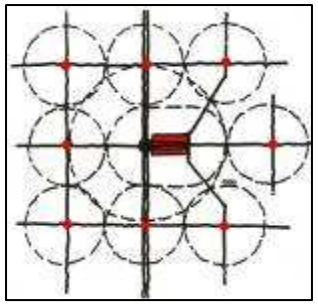
ACNU08 Brisbane

Integrated Urban Structuring in Australia

An Overview of Principles and Practice

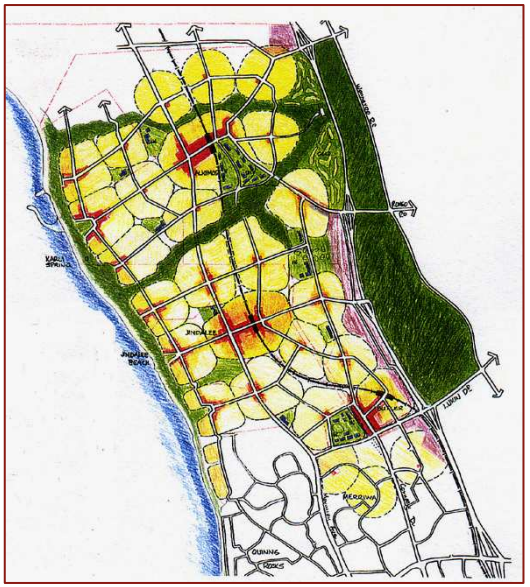
Wendy Morris
Ecologically Sustainable Design Pty Ltd
Melbourne, Australia
esdesign@netspace.net.au

What is Regional Structuring?



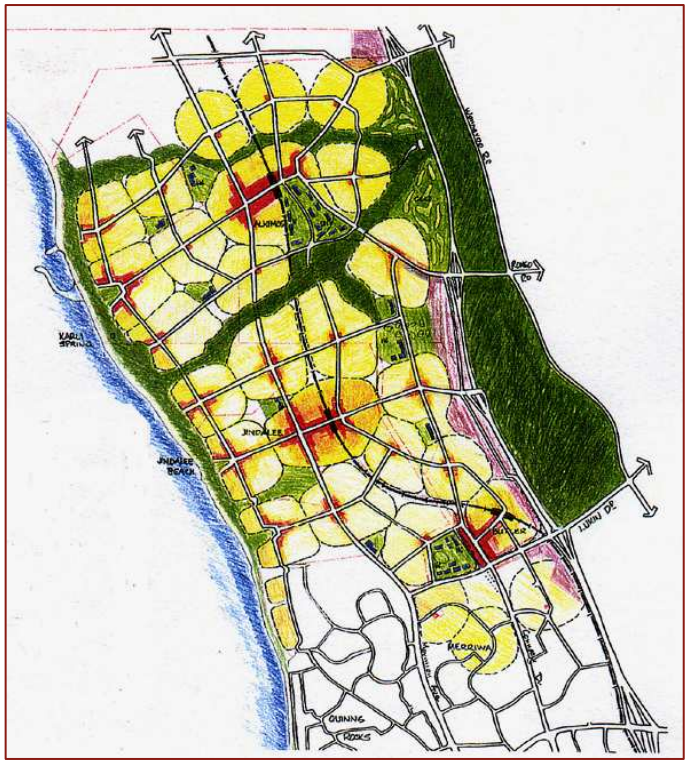
New Urbanist regional structuring is a new and different approach to regional planning.

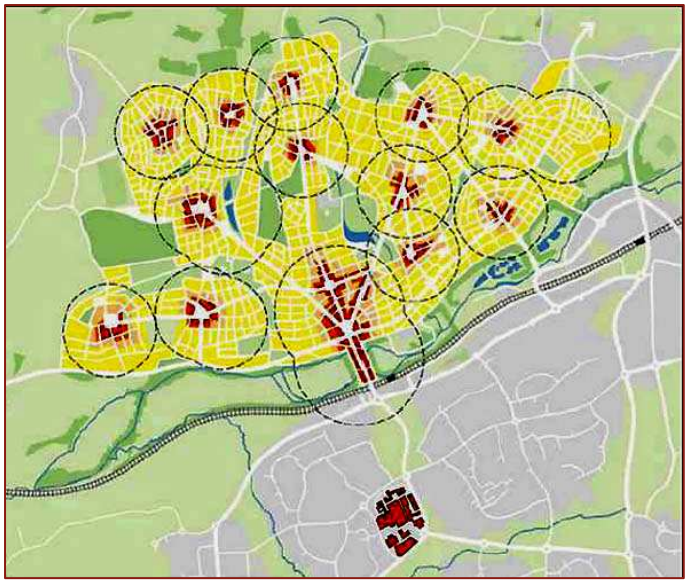
It resolves urban structure out to a logical long term urban edge, and resolves the structure within down to the detail of transit, walkable neighbourhoods, indicative street networks and centre's role.



Why do it?

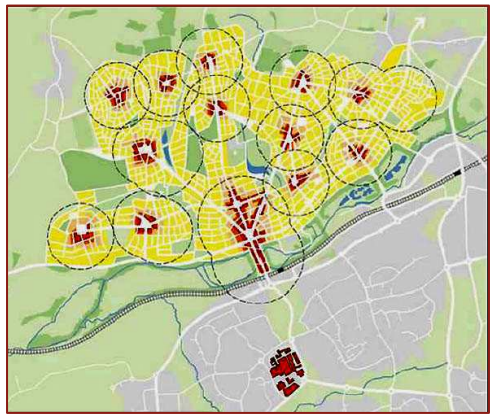
- **Excellent approach for testing different urban structure scenarios**
- **Essential for good planning for significant public transport**
- **Provides a better opportunity to effect a meaningful green/urban resolution**
- **Provides opportunities to resolve appropriate roles for centres**
- **Ensures long term thinking about infrastructure requirements**
- **Provides a good basis for decisions on both minimum density and staging of land release**

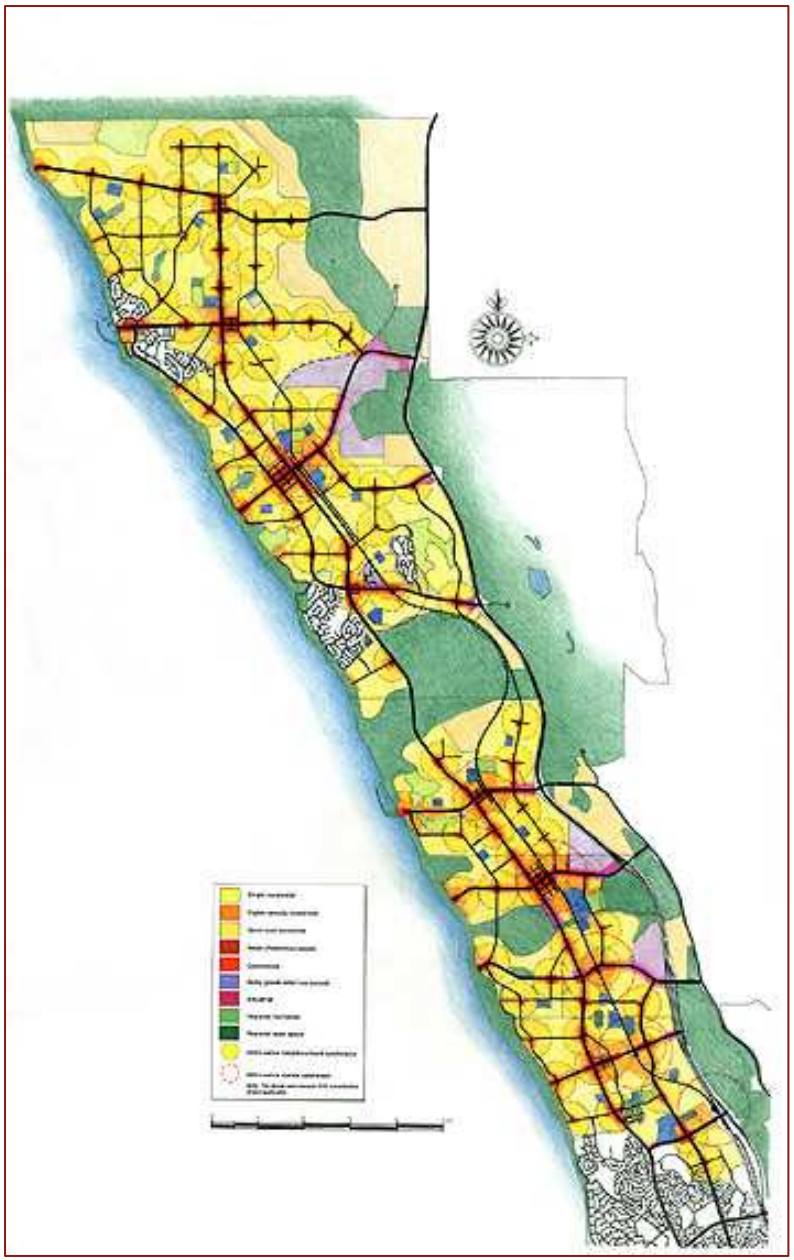




Who should do it?

- State and local governments undertaking long term strategic planning of both greenfields and urban redevelopment sites
- Those doing long term planning for fixed route public transport
- Developers (or development consortiums) with major sites
- Developers of smaller sites, to understand how their site fits in the existing and future sustainable urban framework





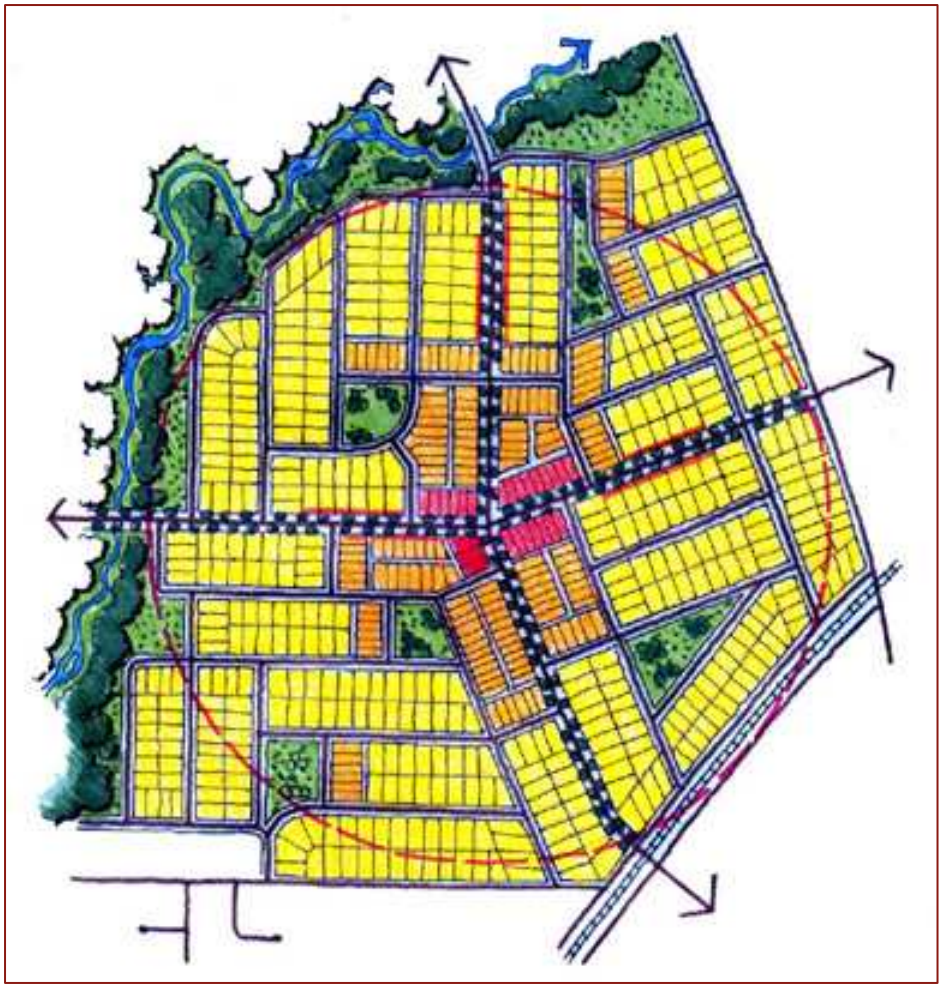
How is it best done?

ENQUIRY BY DESIGN

Enquiry by design workshops or charrettes provide for:

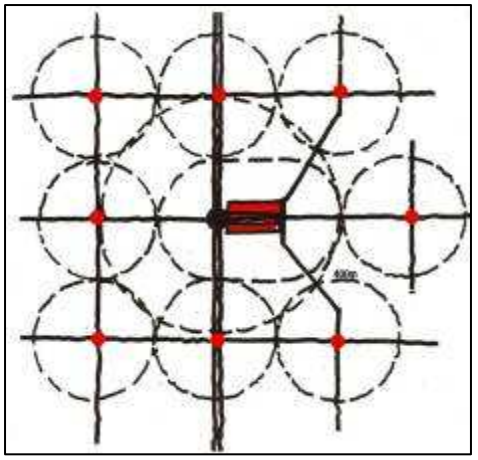
- **Stakeholder engagement**
- **Opportunity to ensure that all stakeholders are briefed on sustainable urban outcomes as well as site and context parameters**
- **Ability to integrate design and technical expertise**
- **Ability to interpret and interrogate constraints in the context of seeking an urban outcome**
- **Ability to debate and measure implications of different solutions**

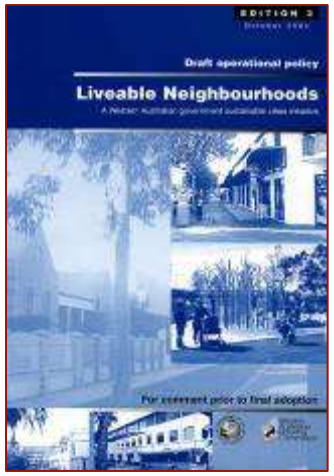
The Basic Element - the Walkable Neighbourhood



Typically 400m radius, plus edges, with a transit stop and a strong and active centre. Around 1000 dwellings or more.

Walkable Neighbourhoods cluster together to form mixed use Towns

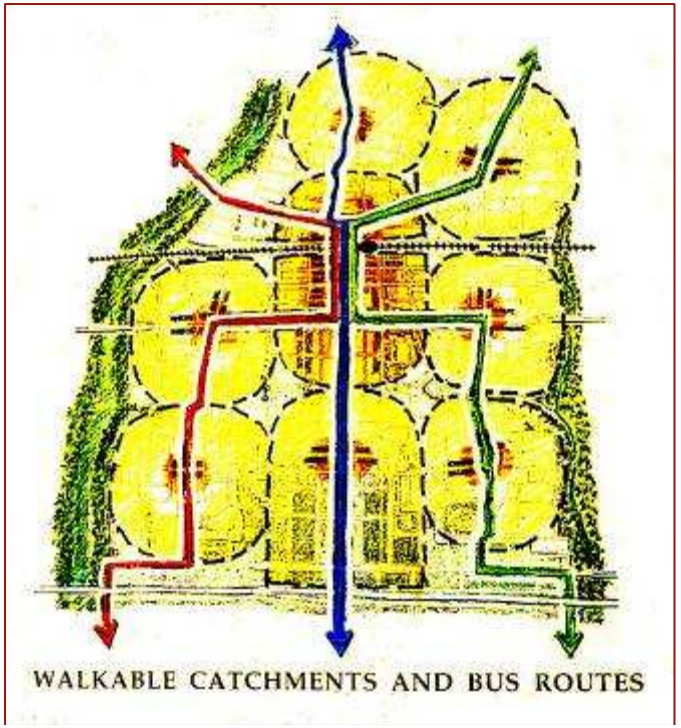


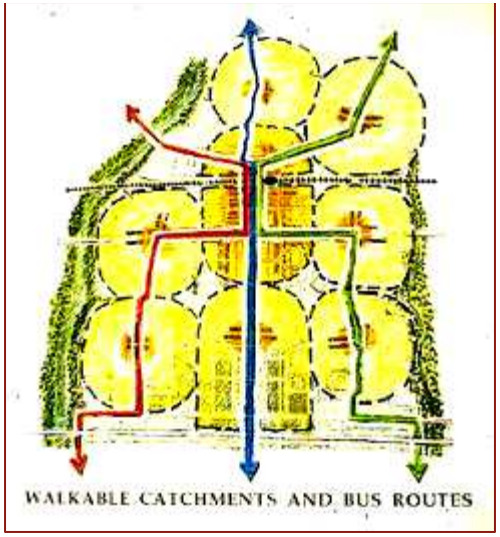


Typically in the *Liveable Neighbourhoods* structure, the mixed use town centre serves around 15,000 to 30,000 people, and is supported by six to nine neighbourhoods.

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

Typically one in ten towns within a metropolis enlarge to become a regional centre, and contain major hospital, civic, educational and office uses. It serves around 100,000+ people.





Detailing up a Town and Neighbourhood Cluster

Arterial Road Network

Neighbourhood Connectors

Street Network & ped-sheds

Locating key land uses

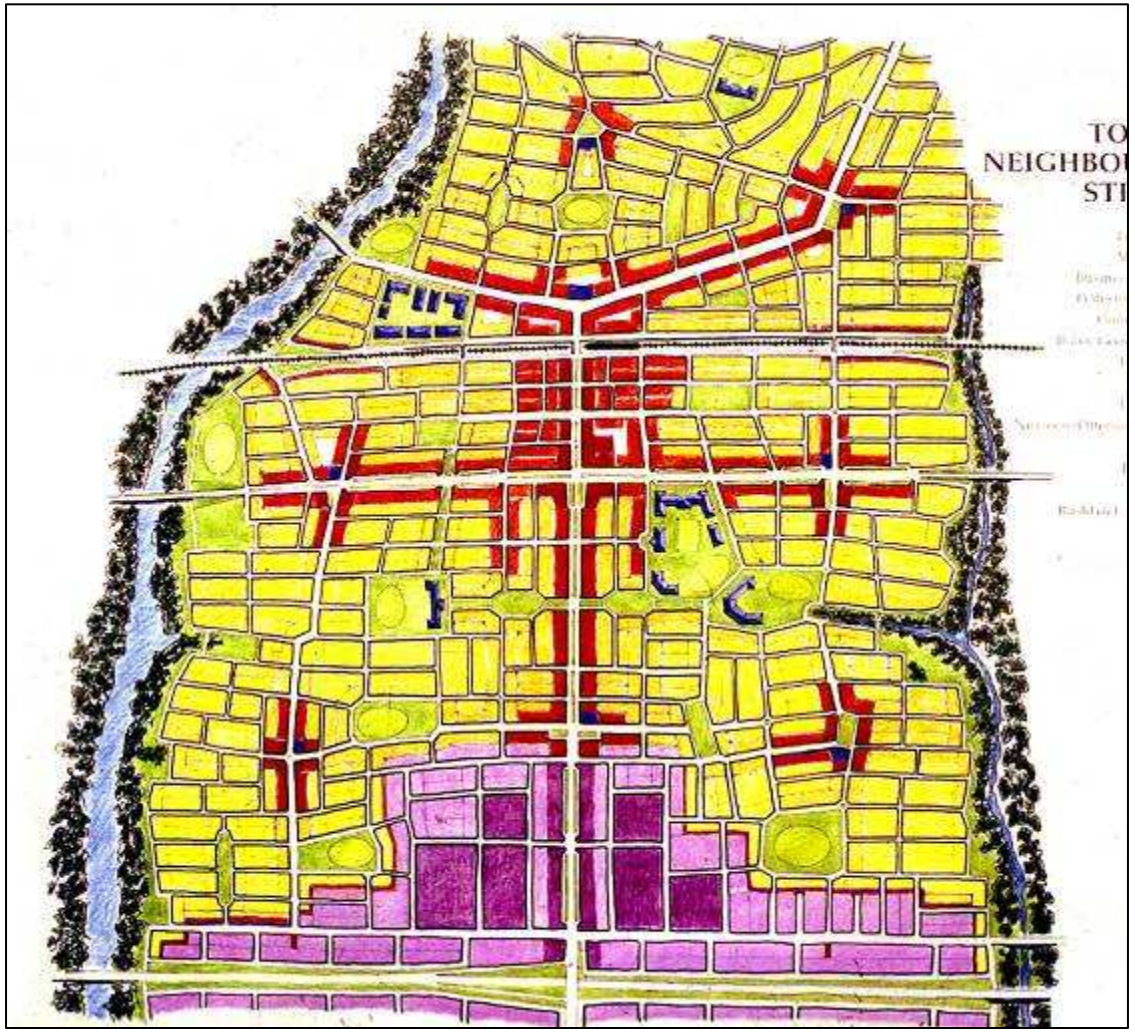
Protecting heritage & environmental assets

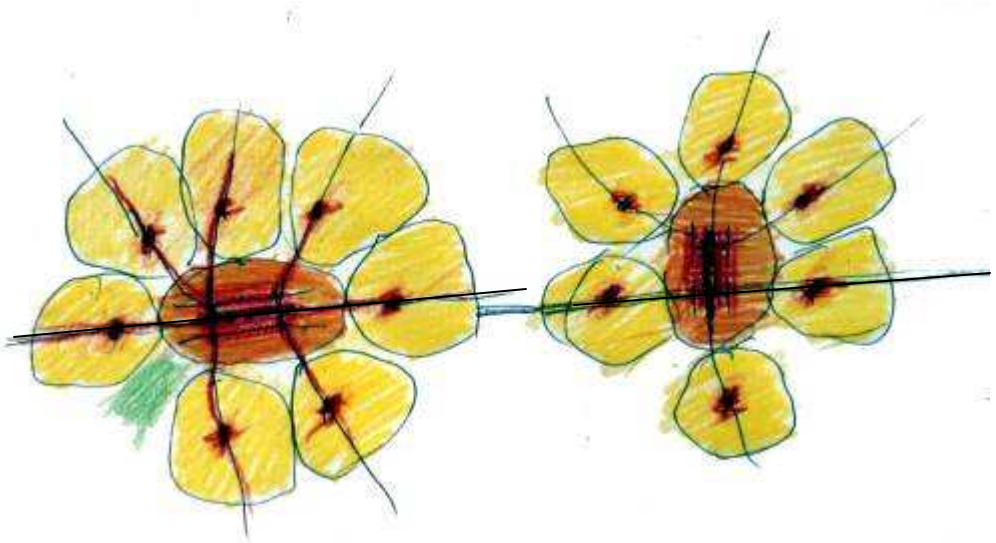
Providing for parklands, schools and SUDS

Defining bus/fixed transit routes

Capitalising on the MOVEMENT ECONOMY

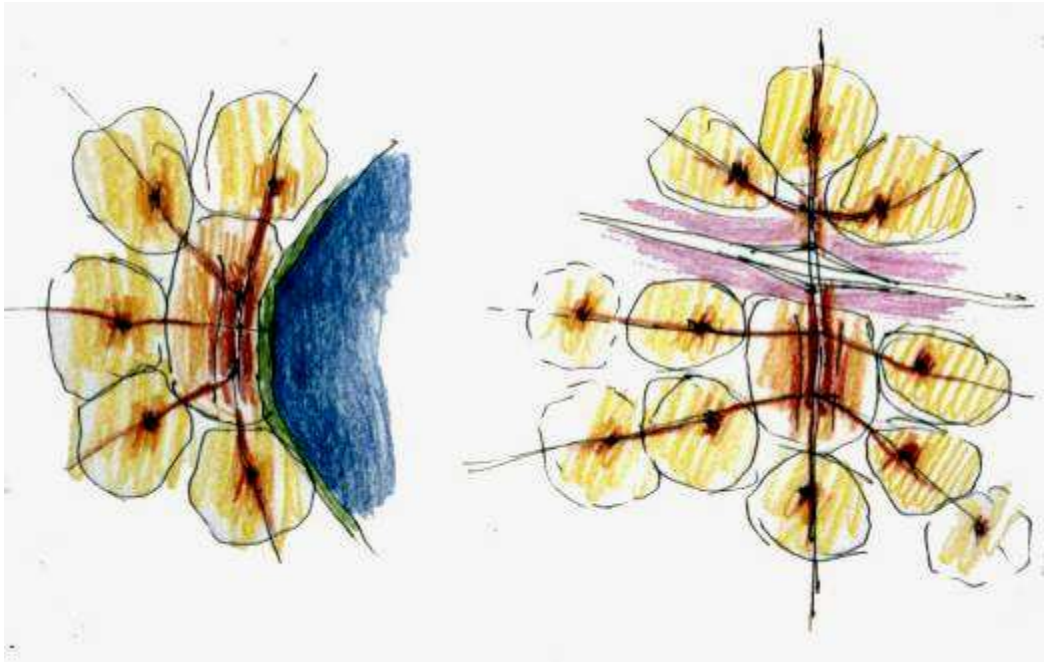
Locating and sizing centres





Various ways for Walkable Neighbourhoods to cluster together to form Towns

- **Along a major arterial**
- **Perpendicular to a main arterial**
- **At a waterfront**
- **Near a motorway exit**



Why is a Corner Store the basic element of a neighbourhood centre….
rather than a community centre, or a school or a park

The key interaction point of a community - incidental meetings

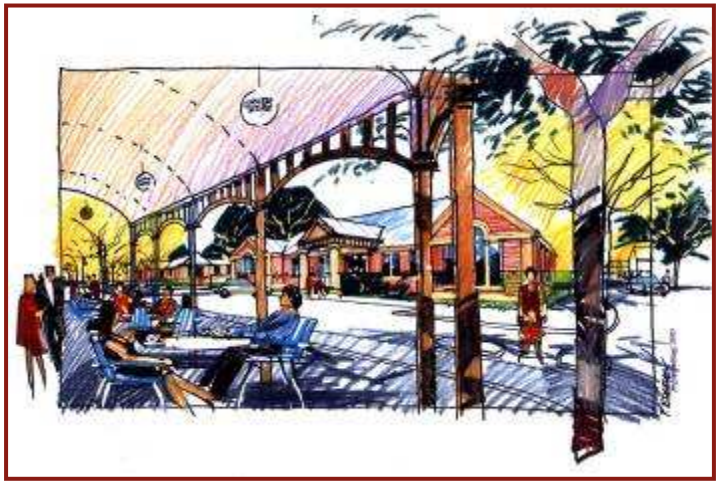
Accessible to all at very low cost

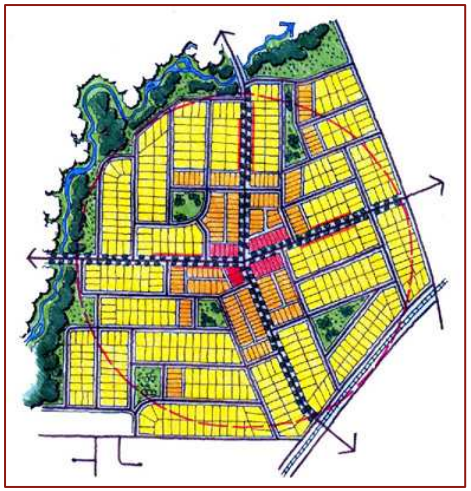
Open long hours

No pre-booking or reason to attend

Surveillance and interest for the bus stop

Add a post box, shade tree, veranda, a seat or two and a dog-watering bowl and the ‘store destination’ serves many more purposes



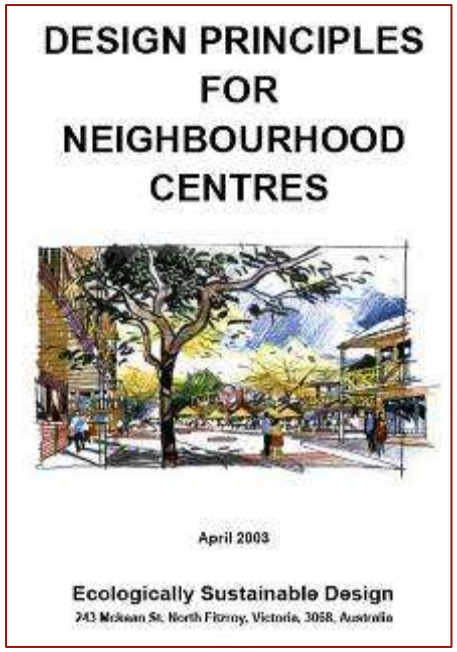


Schools and community facilities are more formalised in attendance and only appeal to parts of the community. Parks alone are not a ‘centre’.

Neighbourhood Centres
- easy to draw but very hard to deliver!

A 400 metre walkable radius (50 ha of urban development), with:

- good street 'pedshed' to the centre,
- plus some extra urban land at the fringes (10-30ha)



A corner store must be a minimum facility at a neighbourhood centre.

To support a corner store, the centre must be:

- on through streets with at least 5000-6000 total daily trips on them, and
- serve around 1000 dwellings (ie. 17-20 dw/ha over 50-65 ha)

Corner stores are typically very small (150-250sqm), and are preferably combined with a multi-storey, multi-generational dwelling. They should be built by the developer, then sold or leased to operator.

Developer cost and value of a corner store… is it justified?

Land and construction cost: $500,000 built in Year 1; sold in Year 6

Rent free/reduced for around five years (till full development)

1000 - 1200 dwellings in store catchment

Sales rate: 300 lots/annum

Estimated sales and marketing budget $50M

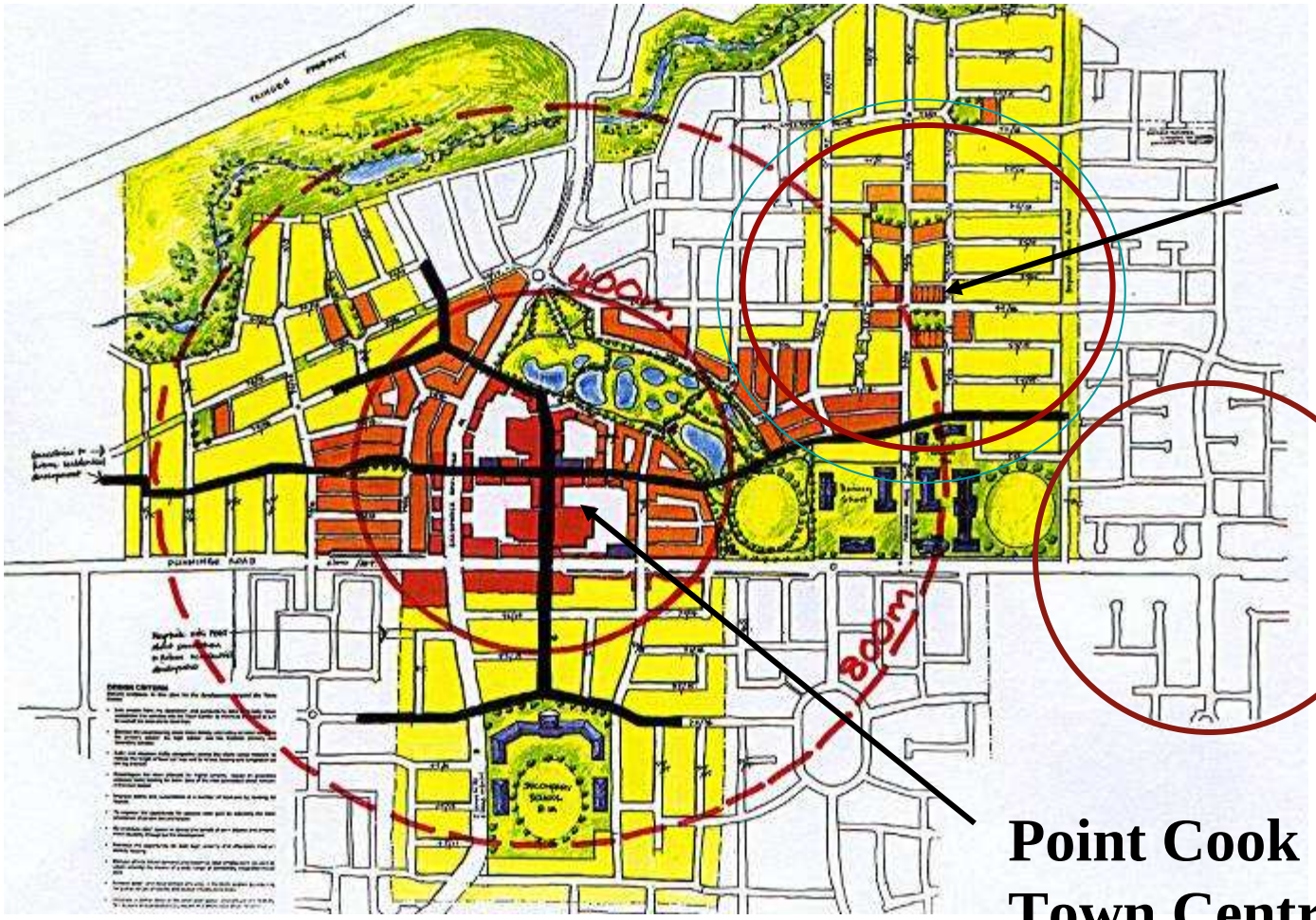
Estimated holding costs for six years is only around $300,000 (<1%)

Store underpins or accelerates sales rate and provides early facilities

Operator establishes on business from ‘tradies’ during construction phase, then progressively from residents

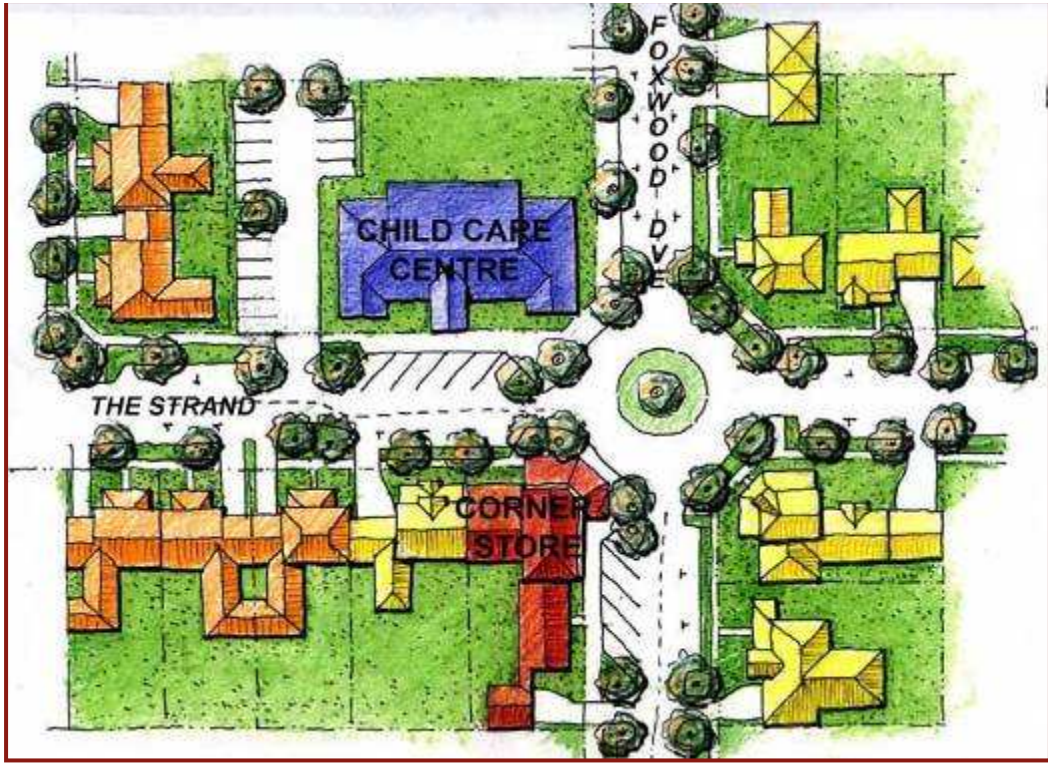
Boardwalk/Point Cook, Western Melbourne

To facilitate a neighbourhood centre….. first set up a supportive urban structure

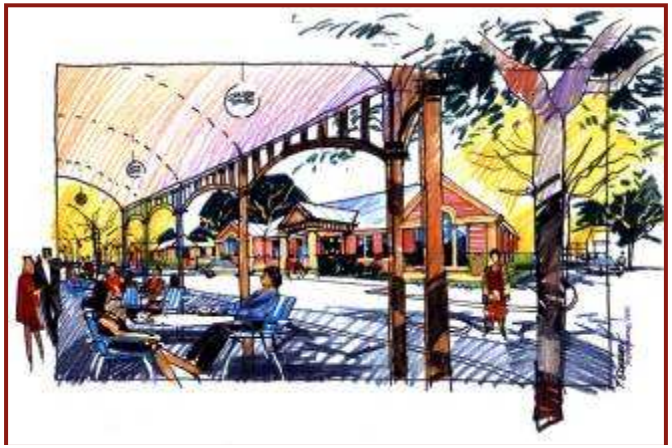


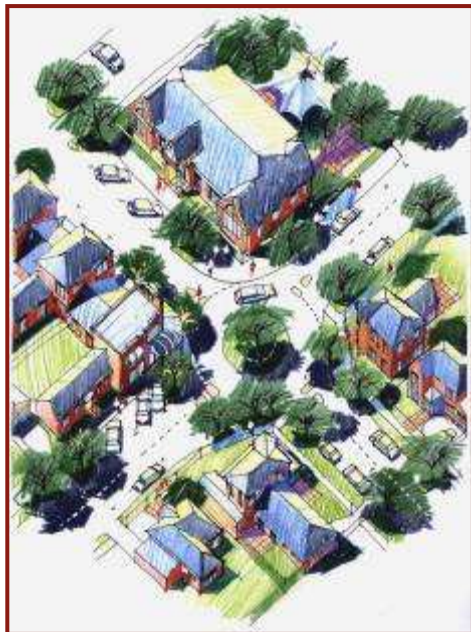
The Strand Neighbourhood Centre

Point Cook Town Centre



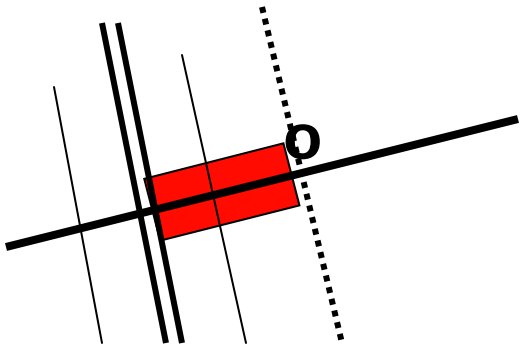
Strand Neighbourhood Centre - now constructed



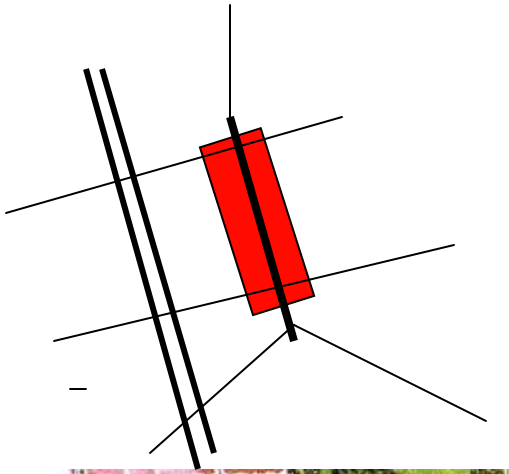


The Relationships between Town Centres and big Arterials

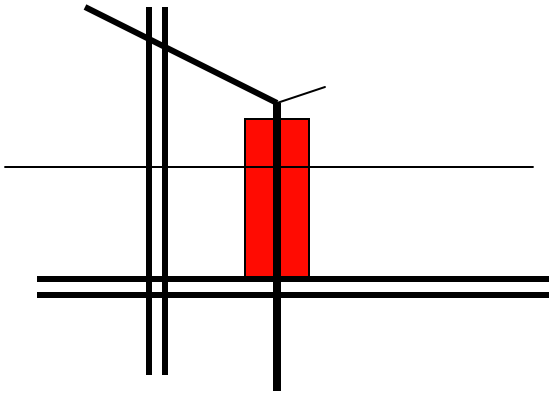
A. Main Street at right angles to big arterial, often with rail station



B. Main Street parallel to big arterial - needs good local street links to core customers



C. Main Street across corner of two big arterials



Jindalee TC

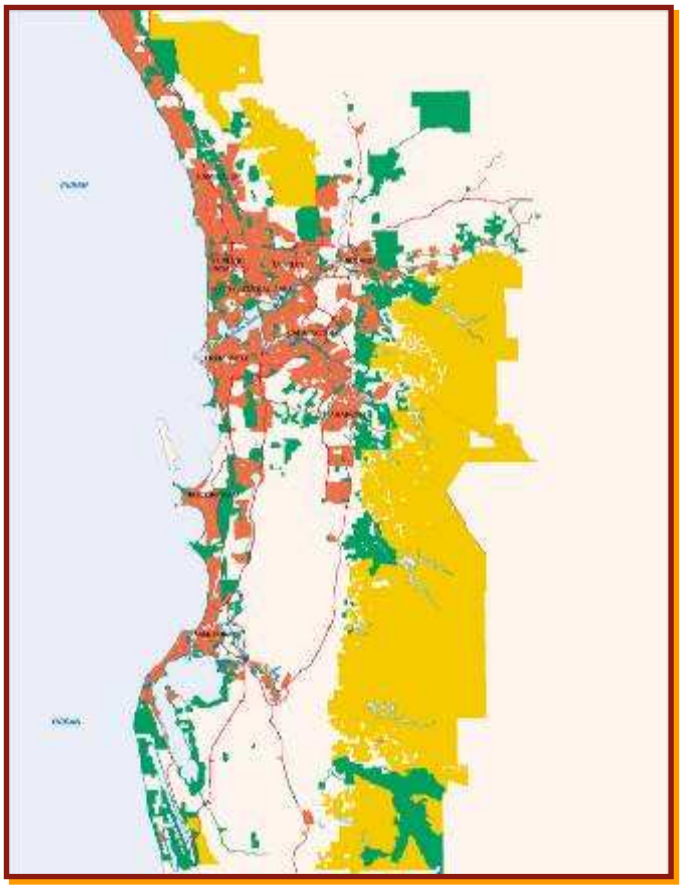
Mungarie Park TC

Point Cook TC

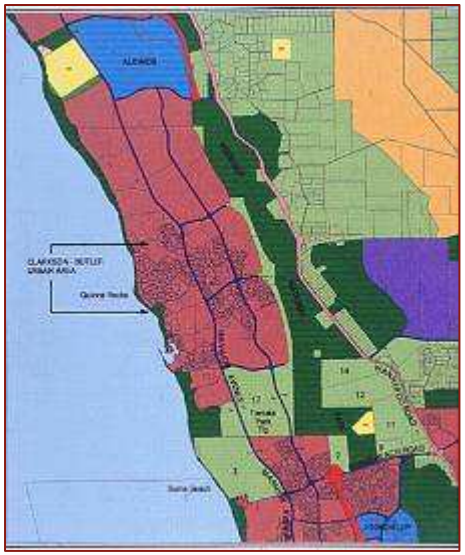
Regional Structuring Examples

Jindalee, North-west Corridor, Perth, WA 1996

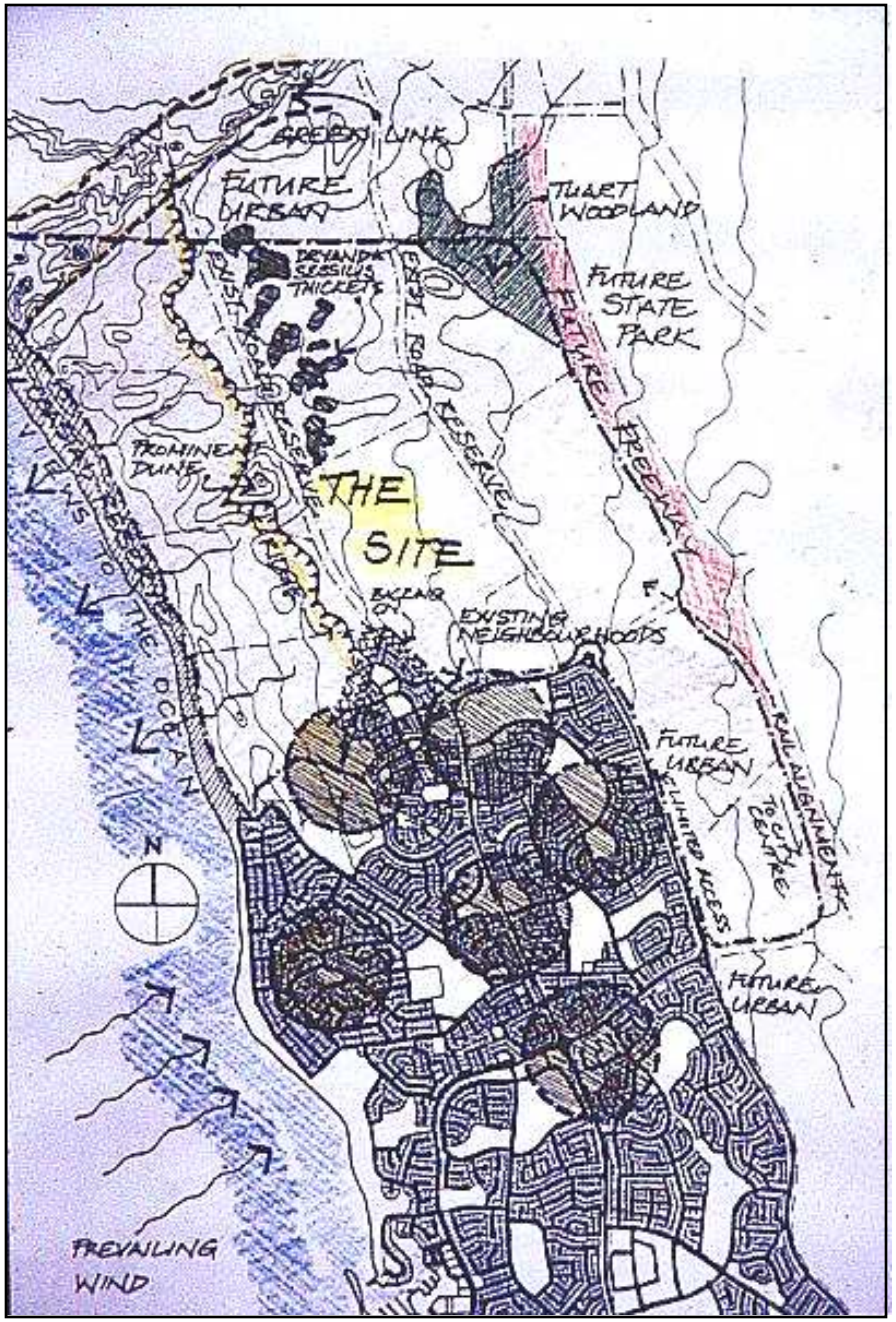
Perth - Population: 1.3 million



Highly-planned 'sprawl' in ever-extending corridors - and an urgent need to change as transport networks are now predicted to fail



1995 North-west Corridor Structure Plan and typical subdivision plans

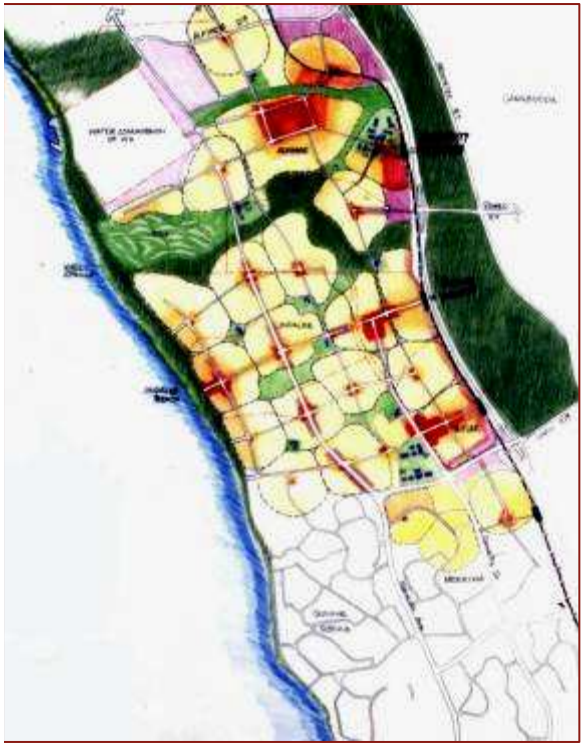


The Jindalee Site

Rolling sand dunes
No habitation
Large land parcels

The landform and vegetation were not traditionally considered to create any constraint to an enthusiastic bulldozer driver!

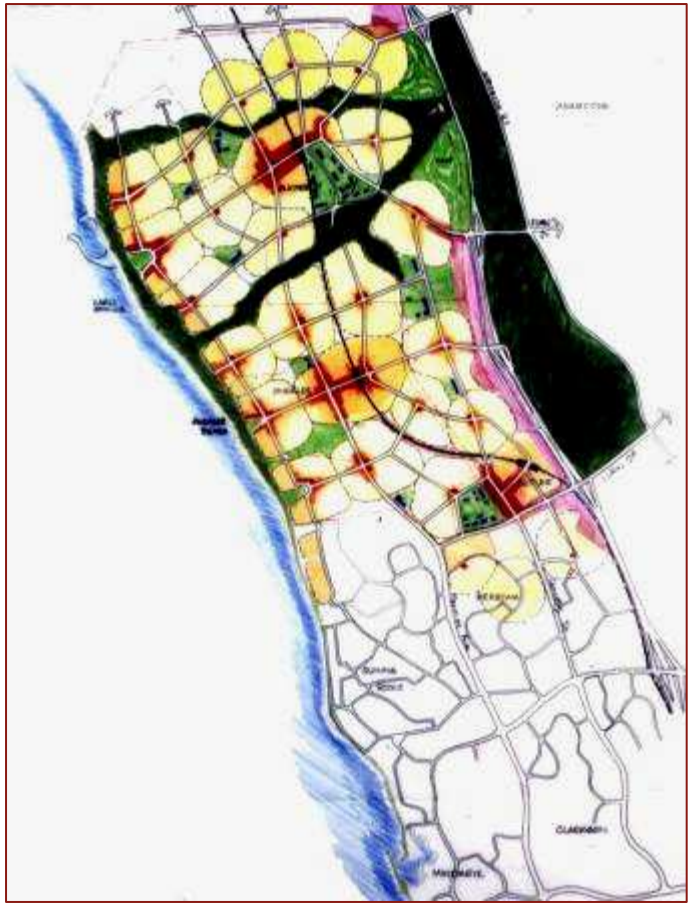
Jindalee Regional Structure Scenarios



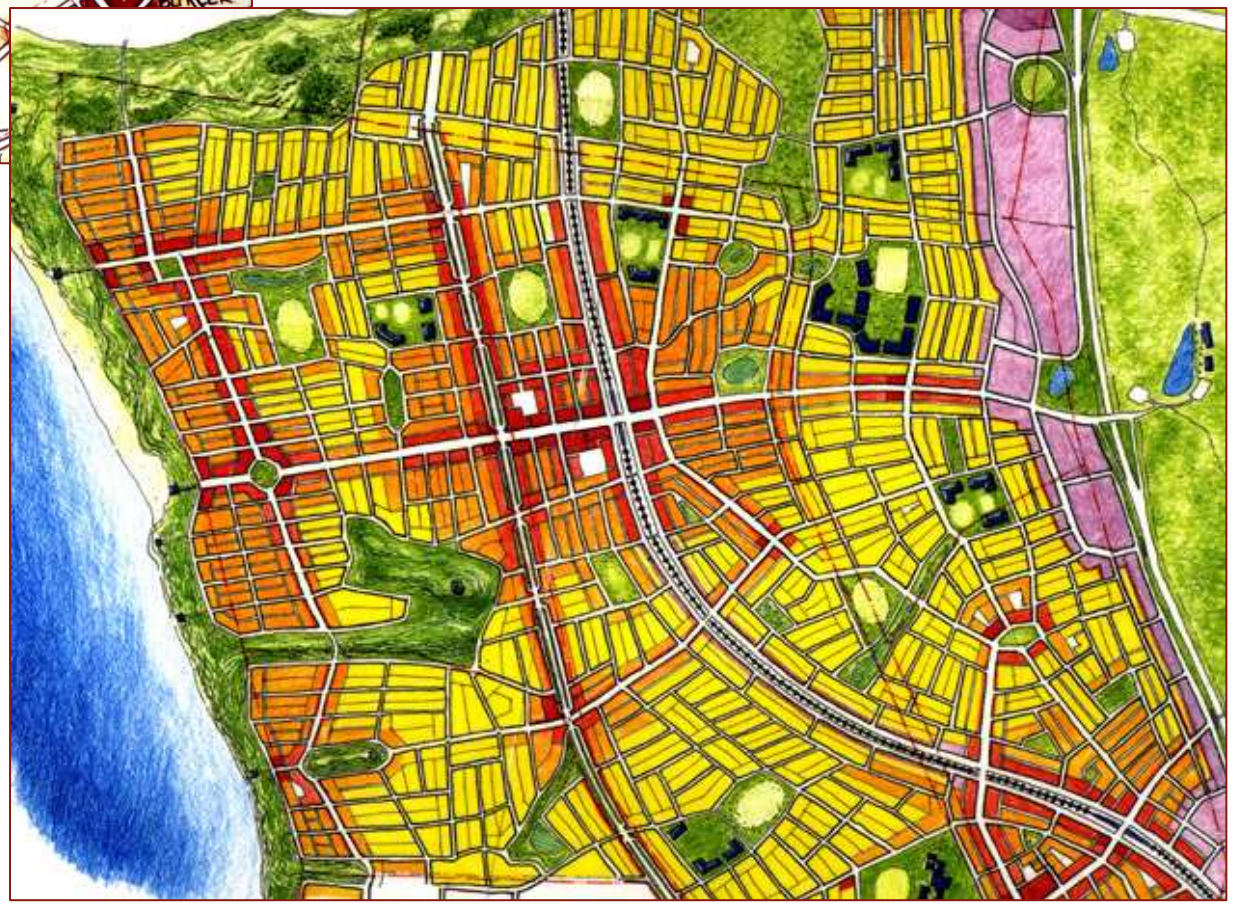
Scenario A –
Rail along Freeway, on edge of urban corridor. National Park to east.

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

Scenario C –
preferred Rail in the centre of the urban corridor



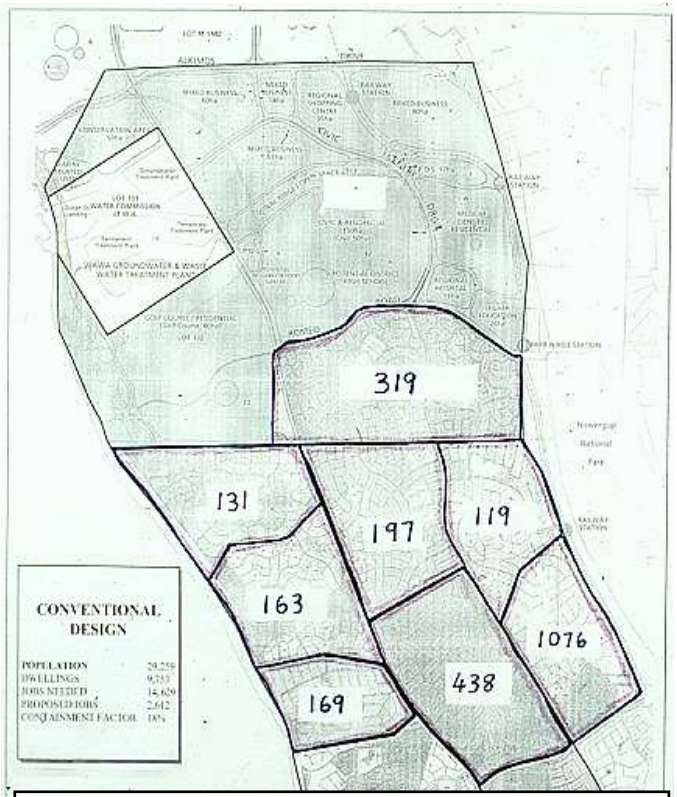
Jindalee Town and Neighbourhood Structure



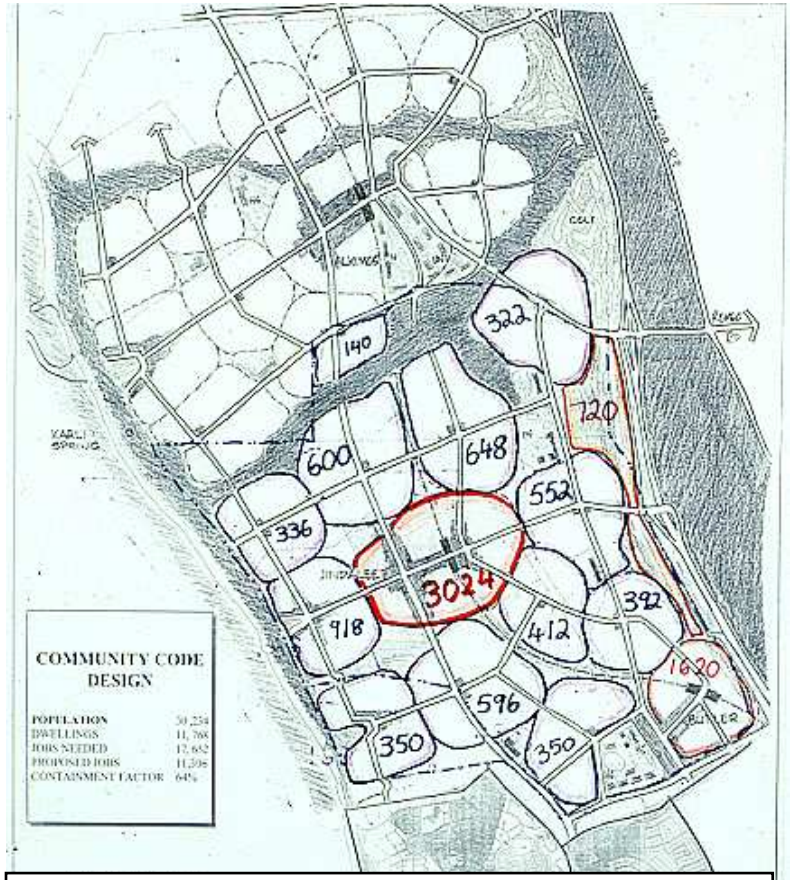
Testing by design at the more detailed scale, then re-adjusting the regional structure as necessary

Jindalee - Measuring Outcomes

Comparing Employment

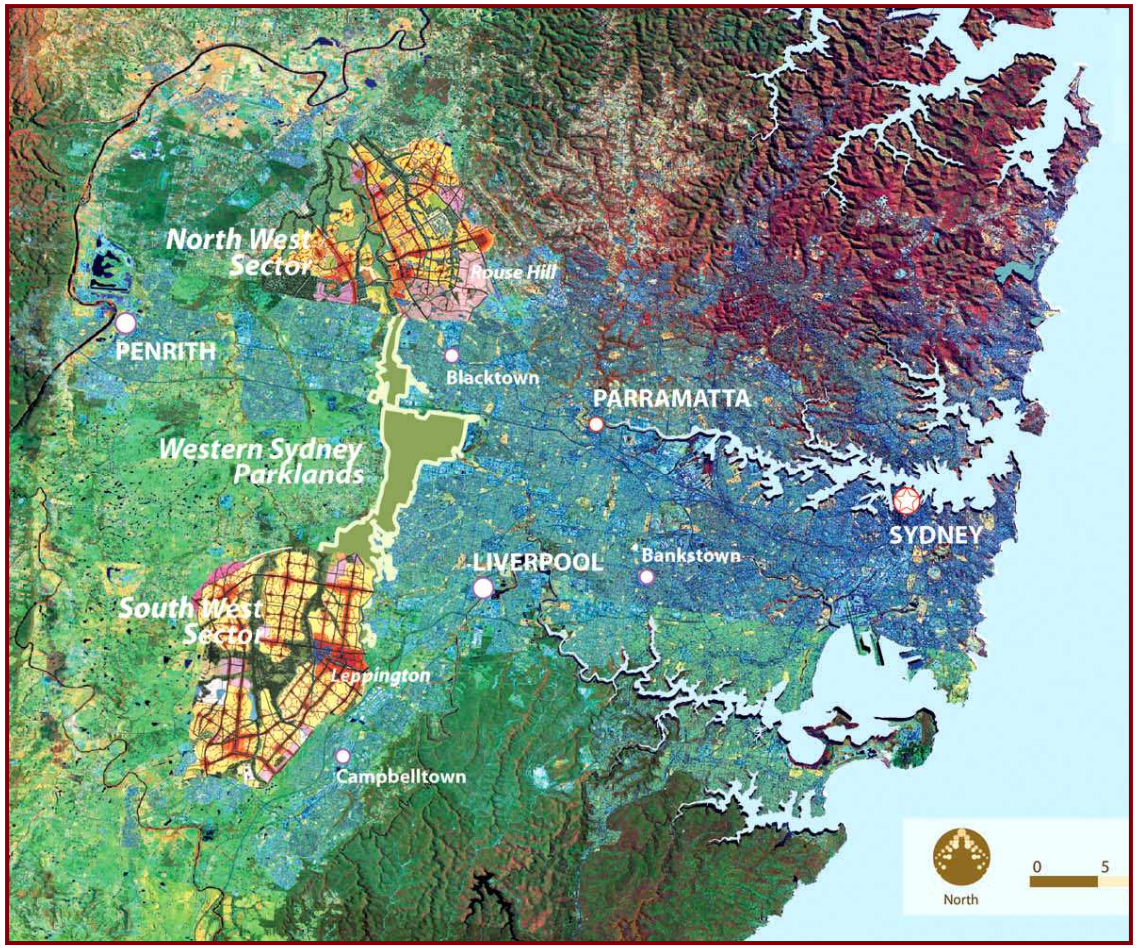


Conventional Design	
Population	29,259
Dwellings	9,753
Jobs Needed	14,629
Proposed Jobs	2,612
Containment Factor	18%



Liveable Neighbourhoods Design	
Population	30,234
Dwellings	11,768
Jobs Needed	17,652
Proposed Jobs	11,306
Containment Factor	64%

Western Sydney Urban Land Release



NSW Dept of Infrastructure, Planning and Natural Resources 2003-5

Two main remaining large growth areas totaling 26,000ha in the Sydney Basin, population 380,000

Joint public/private funding of $7.8 billion of infrastructure

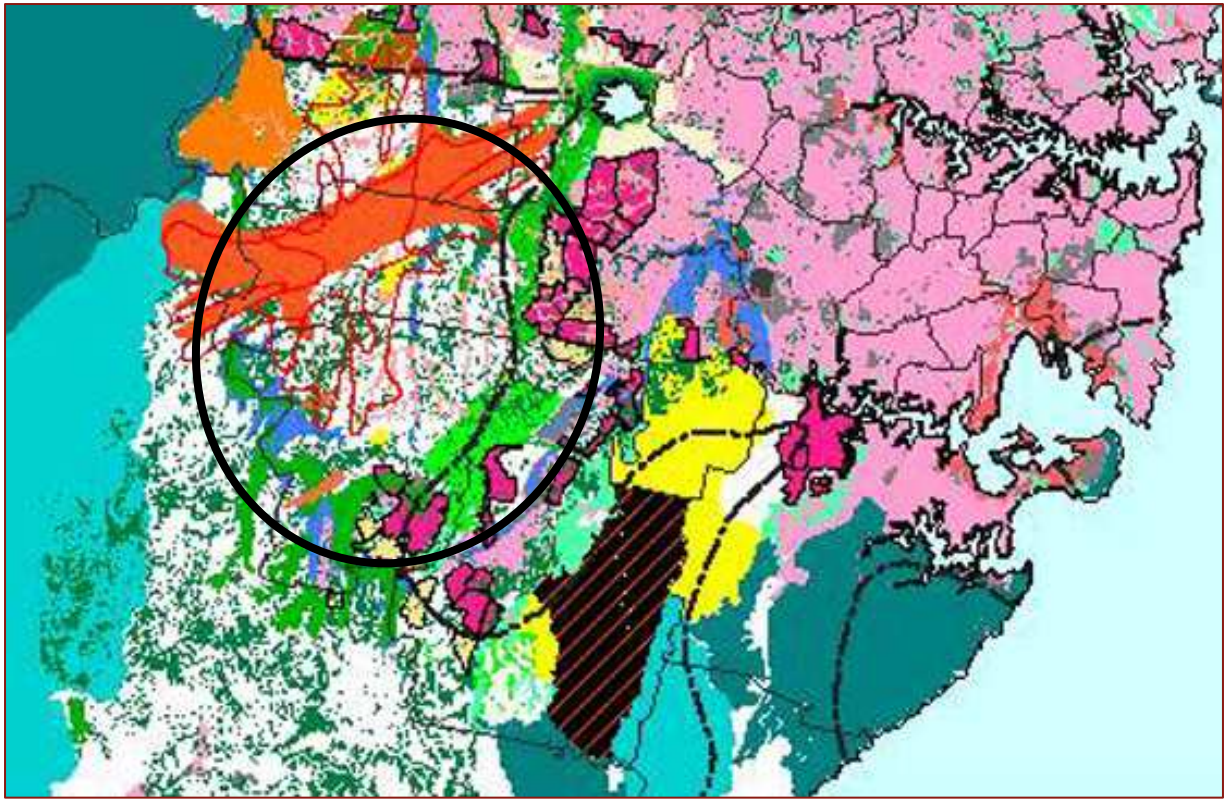
Growth Centres Commission (GCC) set up

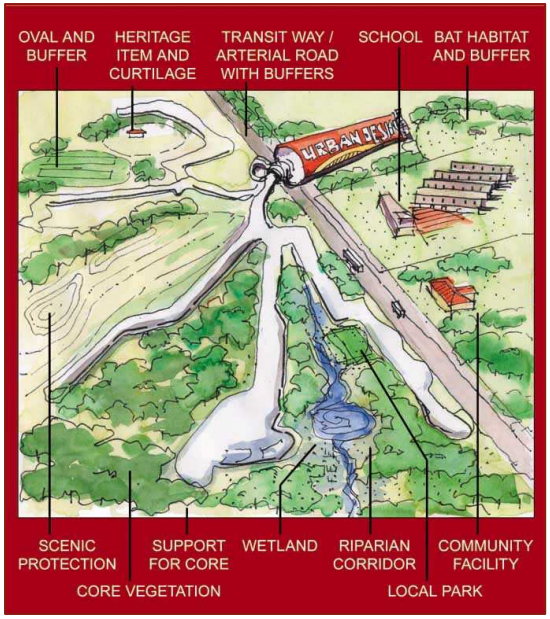
Regional structure now set, detailed design to be administered by GCC and local Councils.

www.metrostrategy.nsw.gov.au

South West Sydney - Constraints mapping

Conventional constraints mapping showed very little unconstrained land for development.

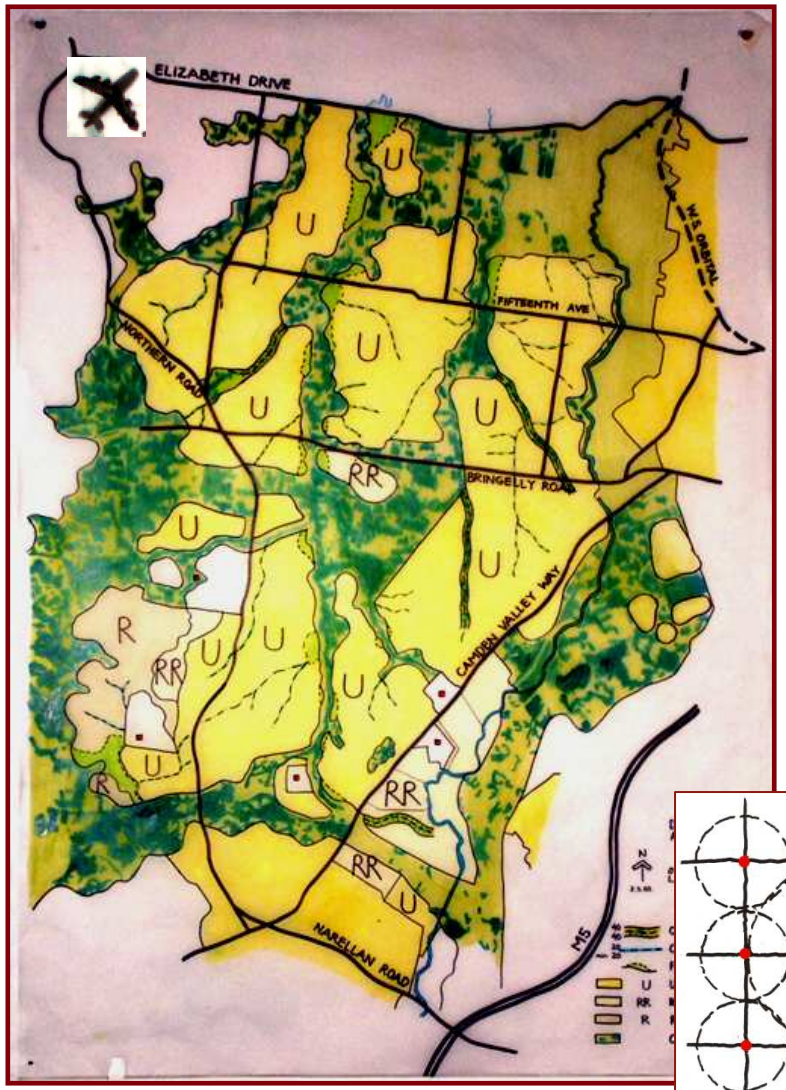




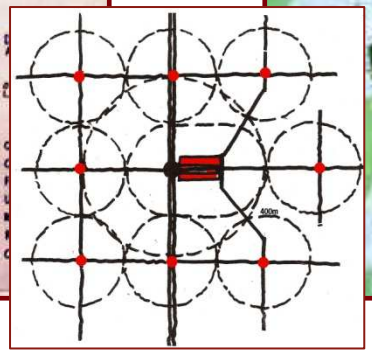
Computer says NO!

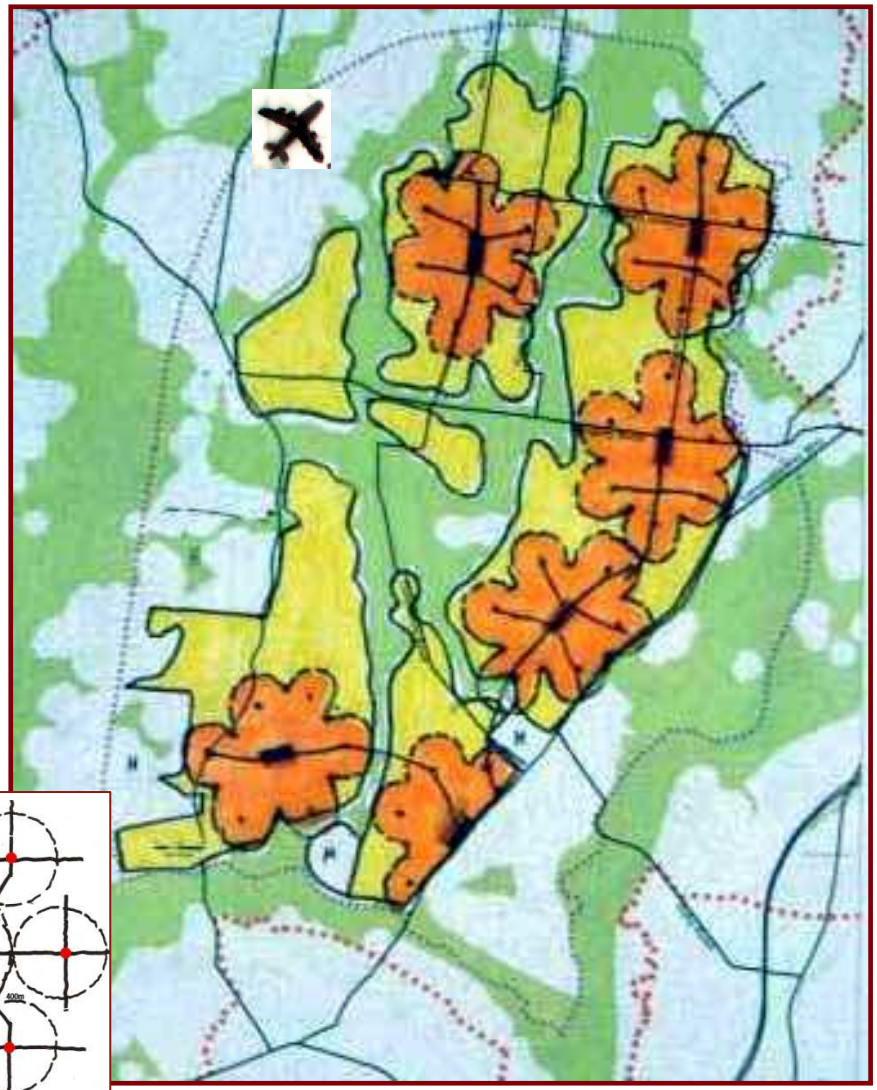
"But good urbanism is not toothpaste; it can't be squeezed into the gaps remaining after everything else is set aside." Evan Jones

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

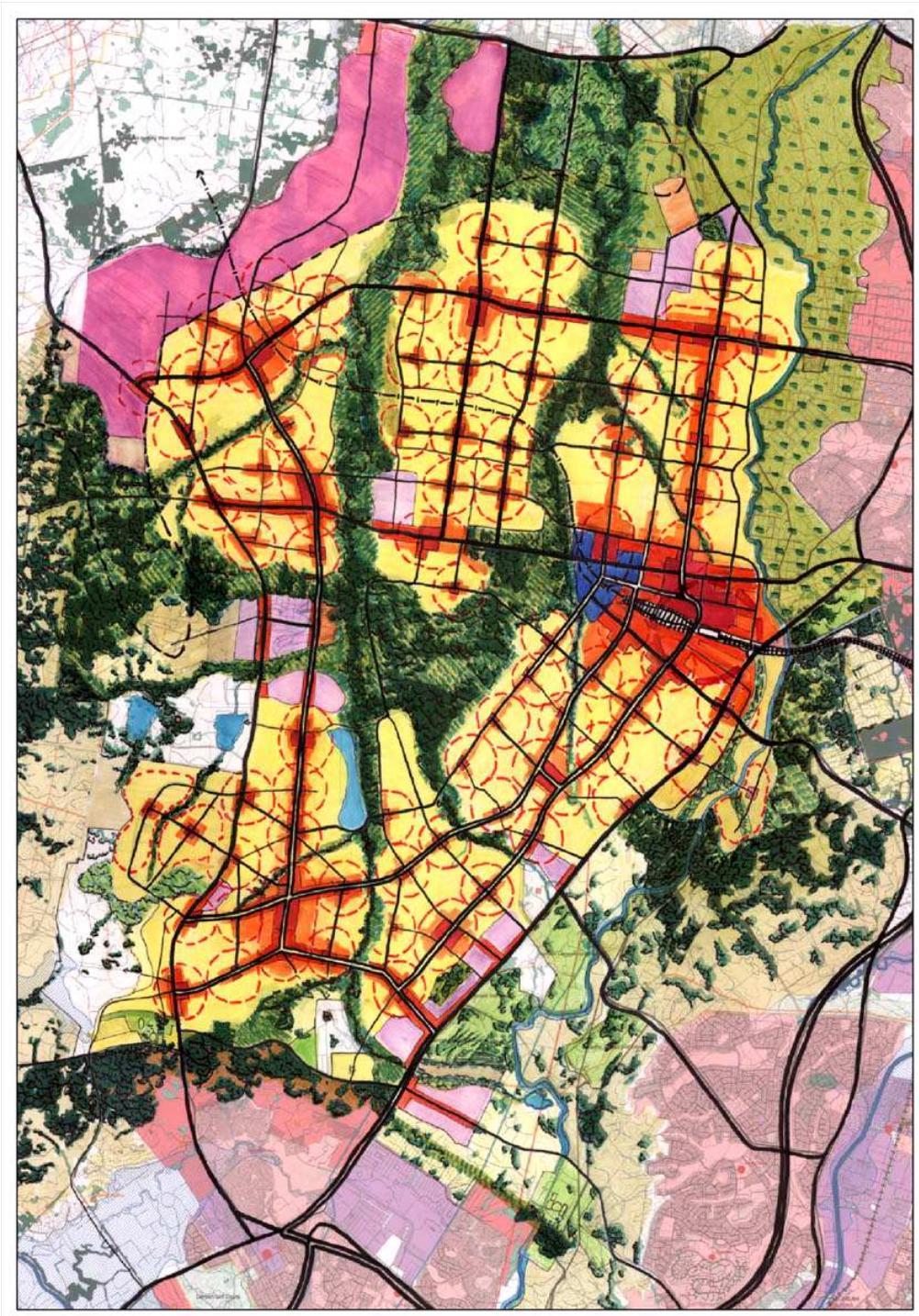


Preliminary Urban and Green





Preliminary town locations



South West Sydney
Final adopted plan

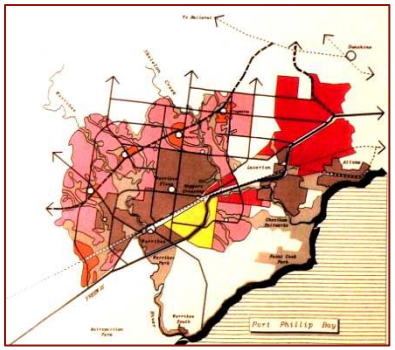
Rail to Leppington - a new Regional Centre.

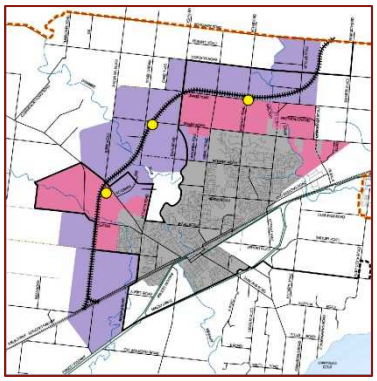
Bus transit boulevards to five town centres. Possible conversion of key route to LRT in future

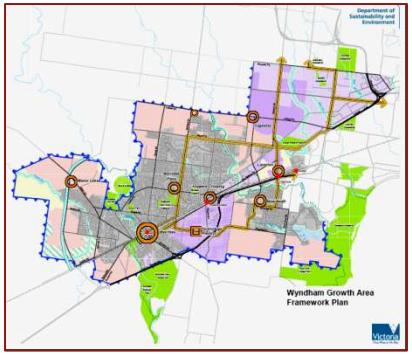
Walkable neighbourhoods with local centres and bus routes on local arterials.

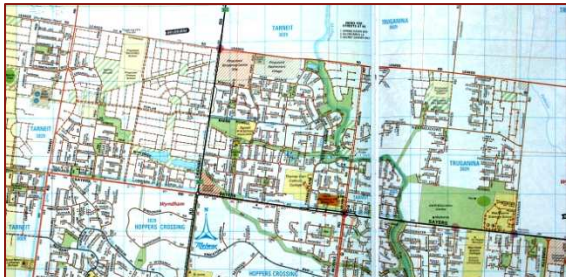
Green network and heritage farms between towns

Regional Structuring - More Challenges with Urban Extensions









Responding to Urban Growth Boundaries… poor long term structure as a result of city growth through small incremental urban extensions as boundary is adjusted

Ignoring or failing to understand the influence of big infrastructure such as new roads

Inability to build new town centres and jobs integrated with key government investments such as universities and hospitals

Expecting good public transport without density

Converting rural residential areas to good sustainable urbanism

Can we get more urban schools?

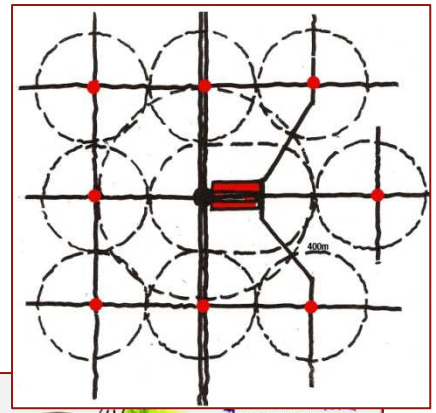
Conclusion

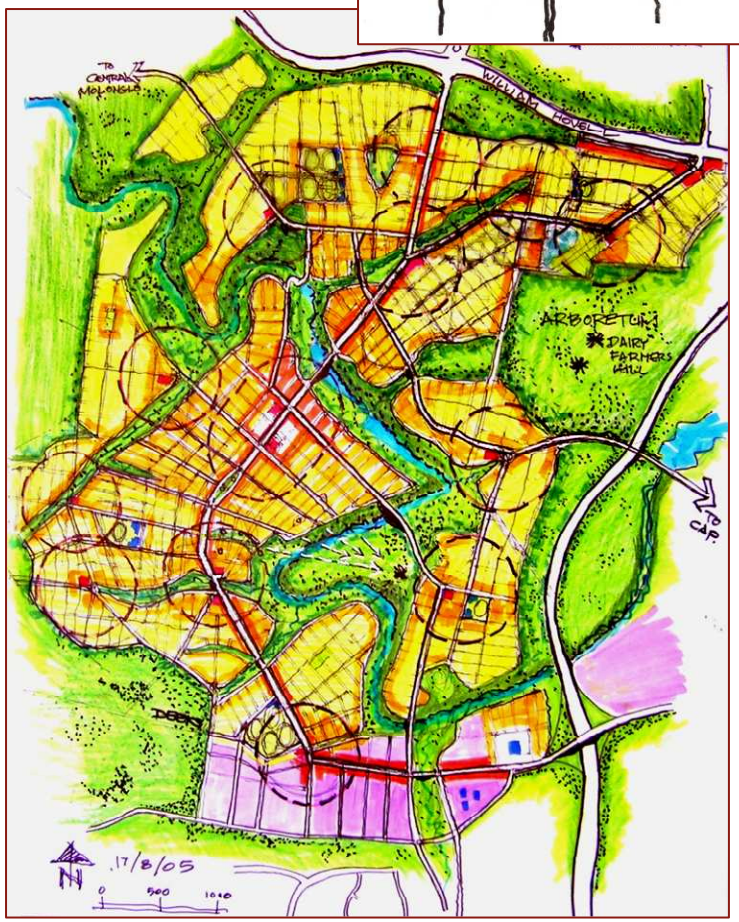
In order to ensure that places will work well, we need to design them out as pieces of cities and towns.

The structuring approach is based on good examples of traditional cities, together with responses to current parameters.

The circle templates are a representation of what will work when adjusted to the site.

Constraints must be interrogated to ensure urbanism is not fractured by green.





Molonglo Valley, Canberra

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