The Policy, Planning and Practice of TOD in Perth

Steve Beyer
Manager, Transit and Land Use Integration
Public Transport Authority
Key Issues for Urban Planning
– the Case for Something Different

- High rates of population growth
  - 2.36m - 2.6m people in Perth and Peel by 2031
  - an additional 0.75 to 1.0m people
- Imbalance between location of jobs and dwellings
- Poor living affordability in the outer suburbs
- Significant demographic change, especially the proportion of single person households
- High construction costs for infrastructure and the need to optimise the efficiency of the current system
Perth’s Public Transport System

New Metro Rail cost $1.6b and delivered:

- Extension of the Northern Suburbs Railway
- Extensive works between Perth and Kenwick
- A new spur from Kenwick to Thornlie
- New railway to Mandurah
Perth’s Public Transport System

- Urban commuter rail network - 173 kilometres, 189 railcars, 69 stations – Total daily trips ~180,000.
- Urban bus system - over 1,100 buses, 51 million route kilometres – Total daily trips ~240,000.
- The urban rail system has huge capacity potential
  - the Mandurah and Joondalup Lines could carry 22,000 people per hour with sufficient rolling stock, compared to...
  - 9,000 people carried on the Joondalup Line at present in the morning peak hours.
## Perth’s Public Transport System
### Mandurah Line Performance - Arrivals (April 2008)

<table>
<thead>
<tr>
<th>Station</th>
<th>Total Boardings</th>
<th>Bus %</th>
<th>Walk/Cycle %</th>
<th>K ‘n R %</th>
<th>P ‘n R %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandurah</td>
<td>4719</td>
<td>35.7</td>
<td>7</td>
<td>15.3</td>
<td>40.1</td>
</tr>
<tr>
<td>Rockingham</td>
<td>3280</td>
<td>50.8</td>
<td>7.8</td>
<td>16.1</td>
<td>25.7</td>
</tr>
<tr>
<td>Cockburn</td>
<td>2890</td>
<td>39.8</td>
<td>3.8</td>
<td>18.7</td>
<td>37.7</td>
</tr>
<tr>
<td>Murdoch</td>
<td>5900 (7880)</td>
<td>60.4</td>
<td>6.9</td>
<td>7.9</td>
<td>24.7</td>
</tr>
</tbody>
</table>
Finding the balance between TOD and operating a public transport system for a regional population
Integrating Transit and Land Use
– The Current Reality in Perth

Typical Station Catchment

91% of Total Catchment Area Beyond Walking Range

Walkable Catchment

Station Precinct

9%
Integrating Transit and Land Use
– The Importance of Effective Modal Interchanges

- Low density suburbs are difficult to serve by bus
- Parking is low cost and relatively unconstrained
- Car-based trip chaining is increasing
- Stations with high frequency bus services achieve a 50-60% bus transfer rate

- Approx 38 % of rail patronage is Park ‘n’ Ride
- There is strong latent demand
- The costs of transit parking will rise as multi decked facilities are needed
- Complementary transit parking policy is needed to optimise use of facilities
Opportunities and prescriptions to achieve better leverage from the Government's substantial investment in urban public transport
Transit Oriented Development
- The Theory

A mixed use community with a central node of activity, located within 800 - 1000m walking distance of a transit stop

Key objectives
- Fostering more compact urban development
- Creating places that are destinations
- Creating urban intensity at transport nodes

An effective TOD is based on the four ‘D’s – Distance, Density, Diversity, Design
Transit Oriented Development
- The Experience in Perth (2008)

There are 69 major nodes on Perth’s rail network

Actual TOD development is evident at 9 nodes (City * 4, Subiaco, Maylands, Murdoch, Burswood and Joondalup) plus Wellard?

TOD structure planning and planned development is occurring at 10 nodes (Midland, Ashfield, Brighton, Stirling, Leederville, Canning Bridge, Cockburn, Rockingham, Mandurah, Claremont)
Transit Oriented Development
- Clarkson and Cockburn: A Tale of Two TODs

- Clarkson and Cockburn Central are salutary lessons in urban planning and transit-land use integration
- Clarkson
  - developed at the same time as the station and surrounding suburban areas
  - remote from the retail activity in the area
  - achieved 50% of the residential density and activity proposed at planning stages.
- Cockburn
  - developed by LandCorp
  - land banked until there was a significant critical mass of activity in the area
  - significant density will be realised, based on minimum outcomes.
Transit Oriented Development
- Clarkson and Cockburn: A Tale of Two TODs
Transit Oriented Development
- the Case for Something Different

• The opportunity for transit-land use integration needs to be based on a different planning and development model, with on-the-ground development occurring in stages.

• In other words, what were the recipes for......
Transit Oriented Development
- A New TOD Model

One that provides sufficient patronage from a broader catchment well before that patronage could be achieved through development of sufficiently high settlement density within walking distance of the station.

<table>
<thead>
<tr>
<th></th>
<th>Park ’n ’ Ride</th>
<th>Car Drop Off</th>
<th>Bus</th>
<th>Walk / cycle</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage One</strong></td>
<td>560</td>
<td>470</td>
<td>770</td>
<td>100</td>
<td>1900</td>
</tr>
<tr>
<td><strong>Final Stage</strong></td>
<td>560</td>
<td>470</td>
<td>770</td>
<td>800</td>
<td>2600</td>
</tr>
</tbody>
</table>
Transit Oriented Development
- Getting the Factors Right

• New planning codes based on:
  • form based coding and minimum densities – people/ jobs
  • focus on walking, cycling and public transport
  • real TOD catchments, not transit car parks

• Land-banking and Staging of delivery so that suburbanism provides the critical mass for urbanism

• Government decisions to locate major facilities in TODs to leverage private investment

• New financing mechanisms, with lower risk profile

• Focus on a limited number of centres to achieve real scale
Your Time -
Observations and Questions?