northern light rail
Why Light Rail?

- Projected patronage = Freo, Midland or Armadale
- Need to move large volumes efficiently
- Heavy rail too expensive and too disruptive to urban fabric to create reserve
- Buses overloading Perth City
- Busway with separation/passing = +25m res
- Current passenger No = 1,500-2,000 (in peak)
Travel Demand

TRAVEL TIME – Mirrabooka -Perth

- Current
  26 (30) min - av / (peak)

- PTA Proposed LRT
  23 (26) min

- Team Proposed LRT 23+1+2=
  26 (29) min
Route Options – Catchment Densities

Option A (DoT)

Option B & C (Wanneroo alternatives)
## Alternative Routes

<table>
<thead>
<tr>
<th>Route</th>
<th>Length</th>
<th>No. of Stops</th>
<th>Time (in comparison with Route A)</th>
<th>Catchment Area (in comparison with Route A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>7.4 km</td>
<td>10</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>B</td>
<td>7.6 km</td>
<td>11</td>
<td>+ 1 min</td>
<td>+ 20 ha</td>
</tr>
<tr>
<td>C</td>
<td>6.7 km</td>
<td>10</td>
<td>+ 2 min</td>
<td>+ 16 ha</td>
</tr>
</tbody>
</table>
Analysis

- Destinations – City, ECU, Mirrabooka.
- Northern walkable catchments limited
- (POS, lack of interconnected road network, low density)
- Three distinct characters- North Perth & ECU, Dianella, Mirrabooka
- Development opportunity – North Perth, Dianella Plaza & Mirrabooka.
## Analysis

<table>
<thead>
<tr>
<th>Location</th>
<th>Existing Density</th>
<th>Worker Population</th>
<th>Additional Dwellings</th>
<th>Destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perth/Northbridge</td>
<td>High</td>
<td></td>
<td>1600</td>
<td>D / D.O</td>
</tr>
<tr>
<td>North Perth</td>
<td>Medium</td>
<td></td>
<td>500</td>
<td>D/D.O</td>
</tr>
<tr>
<td>ECU</td>
<td></td>
<td>10,000</td>
<td>200</td>
<td>D</td>
</tr>
<tr>
<td>Dianella Plaza</td>
<td>Low</td>
<td></td>
<td>100</td>
<td>D.O</td>
</tr>
<tr>
<td>Mirrabooka</td>
<td>Low</td>
<td></td>
<td>1300</td>
<td>D / D.O</td>
</tr>
<tr>
<td>Additional Incremental Dwellings</td>
<td></td>
<td></td>
<td>500</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>4,200</strong></td>
<td></td>
</tr>
</tbody>
</table>
Northern Spine

MIRRABOOKA +1300 dwellings

DIANELLA +1300 dwellings

ECU +200 dwellings

NORTH PERTH +500 dwellings

Growth Potential
North Perth

- Development Opps (Low, Med, High)
- 2 Portal Sites
- 2 Anchoring Stations (bar-bell)
- Unifying landscape
- North Perth Plaza as the heart
North Perth

Tram Stop Two
North Perth
North Perth Plaza
Walcott/Fitzgerald ST Tunnel

- Approx $25 M for Tunnel
- Disconnects Streets
- At-grade LRT could have priority phasing through intersection
Edith Cowan University
Dianella Plaza

- Deviated Bus Route through ‘main street’
- Redevelopment of Alexander Drive frontage
- Residential and retail expansion
Dianella Plaza

- 6 Bus stops, 3 layover bays
- Tram stop
- New ‘main street’ links to Dianella Plaza
- Mixed use/Res
Mirrabooka – Yirrigan Drive
Mirrabooka – Sudbury Place
Mirrabooka

- Gradual redevelopment of car-based commercial into a variety of residential and mixed-use types.
- Approx 450 new dwellings
The Northern Spine

ECU
+200 dwellings

Dianella
+1300 dwellings

North Perth
+500 dwellings

Mirrabooka
+1300 dwellings

Growth Potential

CBD

To depot