AITPM Victorian Branch Technical Forum

Traffic and Parking Impacts

Wednesday 6th April 2011, 5:00 pm – 6:30 pm
VicRoads Theatrette, 60 Denmark St, Kew

Our speakers this evening are…

Charmaine Dunstan  Director, Traffix Group
Kon Kouinis  Senior Transport Engineer, City of Maribyrnong
Parking & Traffic Impacts
A Local Government Perspective
6 April, 2011
Kon Kouinis

About Maribyrnong

• Located 4km west of Melbourne CBD
• Area: 31.3 square kilometres
• Population: Approx. 71,500 (June 2009)
• Footscray – Transit City
• Intensification and gentrification
• ‘Gateway’ to the Western Region
Residential Development Forecast 2007 - 2031

- 19,526 additional dwellings within the municipality
- 8,437 additional dwellings located within Footscray
- Maribyrnong’s estimated population in 2031: 104,400 (46% increase)
Parking Provision Factors

- Set rates within Planning Scheme
- Proximity to Public Transport
- Sustainable Transport
- Availability of on-street parking

Residential Estates

- Generally 1-2 off-street spaces per dwelling as per Planning Scheme
- More vehicles than available spaces, resulting in overflow on-street parking
- Garages not used for parking
- Lack of public / sustainable transport options
Footscray CAD

• Public and private car parks in addition to on-street parking
• Competing demands between residents, traders, employees, visitors and commuters
• More public / sustainable transport options - parking spaces waived

However private vehicle trips are still very popular

• Motorists both expect and feel entitled to finding a parking space close to their destination
How will new developments affect existing parking issues?

- Victoria University
- Western Hospital
- Footscray CAD
- Shopping Strips
- Schools
- Transport Interchanges

What can Council do?

- Parking Area Management Plans
- Residential Parking Permit Scheme
- Paid Parking
- Enforcement
- Green Travel Plans
What about traffic impacts?

• Local (Council) roads have to cater for existing traffic volumes and additional traffic generated by proposed developments.

• The same applies for Arterial Roads managed by VicRoads.

Footscray Central Activity District (CAD)
What about external traffic?

- Through traffic or traffic with either an origin or destination within Maribyrnong
- Remember Maribyrnong is the ‘Gateway’ to the West, one of the fastest growing regions in Australia
Answer

• Pray for Regional Rail Link and the electrification of the Sunbury and Melton Railway Lines

www.maribyrnong.vic.gov.au
Traffic & Parking Impacts

Charmaine Dunstan
Director, Traffix Group Pty Ltd

AITPM Technical Forum Australia

Outline

1. The basics – parking and traffic assessments
2. Role of Australian Standards
3. What's New in Australian Standards
4. Common things the standards don’t cover
5. Other Transport Modes
6. What to expect next
7. Tips and Observations
**Relevant Clauses**

- Clause 18 – Infrastructure (18.01, 18.02, 18.03)
- Clause 22 – Local policies, where applicable
- Clause 52.06/Clause 55.03 – Car Parking
- Clause 56 – Residential Subdivision
- Clause 52.36 – Integrated Public Transport Planning
- Clause 52.07 – Loading and Unloading of Vehicles
- Clause 52.29 – Land Adjacent to a Category 1 RZ
- Clause 52.34 – Bicycle Facilities
- Particular provisions for specific land uses
- Others – definitions, land-use terms and nesting

**Car Parking Requirements**

- Using table at Clause 52.06-5, where the use is specified (and not covered a parking precinct plan or another clause)
- Using parking precinct plan or another clause (e.g. Clause 55.03 or Local Policy)
- Where a use is not specified in the carparking table, an adequate number of spaces must be provided to the satisfaction of RA. **This means requirement based on empirical assessment.**
Parking Dispensation: Decision Guidelines

Before a requirement for car spaces is reduced or waived, the applicant must satisfy the responsible authority that the reduced provision is justified due to:

- Any relevant parking precinct plan.
- The availability of car parking in the locality.
- The availability of public transport in the locality.
- Any reduction in car parking demand due to the sharing of car spaces by multiple uses, either because of variation of car parking demand over time or because of efficiencies gained from the consolidation of shared car parking spaces.

Decision Guidelines cont.

- Any car parking deficiency or surplus associated with the existing use of the land.
- Any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement.
- Local traffic management.
- Local amenity including pedestrian amenity.
- An empirical assessment of car parking demand.
- Any other relevant consideration.
What do some of these things mean?

• Different things to different people!

• Walking Distances: Acceptable walking distances vary accordingly to:
  – type of service (i.e. bus or light and heavy rail),
  – road conditions (i.e. footpath grades, the number of road crossings, pedestrian crossing facilities)

• As a general rule, reasonable maximums are:
  – 400m for bus services, and
  – 1 to 1.2km for rail services (some say 800m)

What do some of these things mean?

• Empirical Evidence (or case study data):
  – Using typical rates from appropriate land use databases
  – ABS car ownership data (LGA, Post Code)
  – ABS Journey to Work data (by residential or work place location)
  – Survey a comparable development
  – More is not always better - quality, suitability and robustness of survey methodology is key
    e.g. Childcare centres, hotels/bars, restaurants
  – These surveys are expensive
    (2-3 x parking survey costs)
What do some of these things mean?

- Availability of parking in the locality:
  - Tend to survey larger area than may be realistically necessary to rely on
  - Include on-street and off-street carparks
  - Survey at peak demand times for locality and proposed use (these may differ)
  - Appropriate walking distances depend on locality, land-use and whether long-term or short-term parking is required
  - Most people underestimate how far they walk for parking in shopping centres

What do some of these things mean?

- Parking Credits:
  - VPP Practice Note for Using the Parking Provisions allows for a parking credit to continue where a site is completely redeveloped
  - The key consideration in deciding on whether a credit should be allowed relates to issues of equity and whether allowing a credit would harm other relevant planning considerations
  - This can be complex – the important thing is to compare like with like when applying rates, in the absence of survey data on the existing use
Review of Clause 52.06

- Still waiting!
- Change in approach:
  - Specify and Supply ➔ Assess and Reduce Demand
- Update parking requirements more in line with empirical rates (i.e. actual demands) and separate rates for Activity Centres
- Fewer developments will require a permit for parking dispensation
- Introduces a Parking Overlay to apply to identified Activity Centres, streamlining introduction of reduced rates and contribution plans for parking and transport improvements (where appropriate)

Review of Clause 52.06

- New rates for common uses not previously specified (e.g. child care centre, residential village, retirement village, education centre)
- Separate rates for many retail uses:
  - Shop: 4 spaces/100m² (3.5 spaces/100m² in AC)
  - Food & Drink Premises: same as shop
  - Restricted Retail: 3 spaces/100m² (2.5 spaces/100m² in AC)
  - Supermarket: 5 spaces per 100m² (same in AC)
- 'Standard' rates for ‘place of assembly’ or restaurant uses based on patron no.s (not floor area). Activity Centre rates for these uses are same as Shop (3.5 spaces/100m²)
Australian Standards

- These are design guidelines only
- Assist with the design elements not covered by Clause 52.06-3/Clause 55.03-11 (e.g. ramp grades, grades across parking spaces, column placement, clearances to walls, sight distance)
- A permit is required to vary any dimension or requirement of Clause 52.06-3, which considers:

  *Whether the dimensions and layout of car spaces and access lanes are generally in accordance with Australian Standard AS2890.1.*

What's New in Standards

- Disabled Parking Standards (AS2890.6-2009) introduced
- Additional requirements (more space generally needed to fit shared manoeuvring area)
- No requirement for disabled parking under PS, but is under BCA
- Most commercial and some accommodation developments will require disabled parking
Mechanical Car Parking

- Now commonplace, but not covered by Planning Scheme or Australian Standards
- Always requires traffic engineering input in product selection and design
- Some models preferred over others (at a cost$), but all have their place
- Many combinations available, always evolving
- Suitable for allocated parking only (employee, resident)

Mechanical Car Parking
Car stackers, car lifts, turntables

- Car Lifts
- Shuffle Systems
- Turntables
- Basic Pit Systems
Swept Path Assessments

- Using CAD programs such as AutoTURN
- Based on specified ‘design vehicle’ (e.g. B85 design car, Small Rigid Vehicle, Semi-trailer, specific waste collection vehicles, etc)
- Dimensions sourced from Australian Standards or vehicle specs for non-standard vehicles

Traffic Impacts

- Only of critical importance in larger developments
- Less important in smaller developments as marginal changes occur (parking often more important)
- Based on typical rates, empirical evidence or first principles analysis – tends to be conservative by nature
- Capacity/operational issues focus on peak hours
- Amenity issues focus on daily volume and profile
- Tools available to assist – Sidra or other models (Paramics, Vissim) – remember, they are only tools
Other Modes: Bicycle Parking

- This is an important ‘active transport mode’
- Victorian Cycling Strategy (2009) reports that cycling rates have increased exponentially in recent years
- Cycling suits medium length trips (mean trip length for males is 8.1km, 6.1km for females)
- Growth is attributed to:
  - population and employment growth,
  - changing inner suburb demographics,
  - attitudinal change about health and environmental issues,
  - more and improved bicycle paths and facilities,
  - road and public transport congestion, and
  - cost of travel.

Bicycle Parking: Clause 52.34

- Specifies provision rates for certain uses
- No. of spaces for long-term (secure) and short-term (easily accessible) cyclists
- End of trip facilities – bicycle parking, showers and change-rooms
- Green Travel Plans often include storage/clothing lockers, workplace bicycle repair kits, cycling promotions, BUGs
**Bicycle Parking**

- **References:**
  - Australian Standard AS 2890.3-1993
  - The Bicycle Parking Handbook (Bicycle Victoria)
  - Various product specifications: Cora, Securabike

- **Expect changes:**
  - Requirements for some land-uses are too low for current growth and policy direction (residential, office), and others don’t make sense (nursing home)
  - More flexibility with standards, many off-the-shelf products are more space efficient
  - Requirements for storage/clothing lockers

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**Other Modes: Walking - the forgotten mode**

- Walking is the most environmentally sustainable mode
- It’s the most important mode within inner areas, most trips are short and walking can replace car-based trips
- For many short trips, it may be more convenient to walk than to catch public transport or cycle
- Walking offers many benefits aside from transport, including health and social benefits of incidental exercise
- Most Council strategies aim to deliver pedestrian priority, improve pedestrian safety, improve pedestrian connections, and raise the profile of walking as a mode of choice
Walking - the forgotten mode

Many lawyers make this 700m plus walking trip, multiple times to VCAT on any day.

The Emerging Mode – Car Share Schemes

City of Sydney:
- Geographically smaller than City of Melbourne, but more densely populated
- City of Sydney has approx. 120 car share pods

City of Melbourne has approx. 40 car share pods
The Emerging Mode – Car Share Schemes

Car sharing schemes have operated in Melbourne since 2003 and are increasing at a fast rate.

Who supports it:
Most inner metropolitan Councils, Port Phillip, Yarra, Melbourne, Moreland, Maribyrnong and Darebin

Who does it suit:
• Singles or couples in the inner city, who mainly rely on other travel modes to work
• Couples and families who sometimes need a second car
• Businesses wanting a more cost efficient alternative to taxis, rental cars or maintaining fleet cars

What to expect next

Definitely
• More developments with limited or no parking
• Greater Integrated Transport Focus
• Integrated Transport Plans with larger applications

Maybe
• Motorcycle parking requirements?
• Bike share?
• Car Share requirements?
**Tips and observations?**

When is traffic engineering advice required?

- Anytime there is a basement carpark or steep driveway (no matter how small the development is)
- When parking layout is non-standard or looks tight – it probably is and requires closer assessment
- Where there is ROW access (these arrangements are invariably non-standard)

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**Tips and observations?**

The simple things – detailing of conditions about design

- Correct standards, only those where changes are required under condition 1 - avoid unnecessary arguments

Detailing of crossover conditions?

- Issue/advice on timing of crossover application is problematic
- Avoid embarrassing situations for all
Tips and observations?

Bus stop not shown

DDA stop installed by authorities at bus stop

Someone installs bus seat, makes Herald Sun (pg. 10)

Slow news week? Makes Today Tonight, reported as another Council bungle (mostly inaccurate)

Endorsed Plan

One sure way to halt the traffic

All the while, $$ spent in consulting fees, arguing with Council & DOT to gain agreement on relocation plans, with residents ready to move in.

Thank you